ORDINANCE NO. 19-H

AN ORDINANCE AMENDING CHAPTER 9, FIRE PREVENTION AND PROTECTION, OF THE CODE OF ORDINANCES, CITY OF ALVIN, TEXAS, **FOR** THE **PURPOSE OF ADOPTING** THE 2018 INTERNATIONAL FIRE CODE AS PUBLISHED WITH CERTAIN AMENDMENTS AND DELETIONS; BY REPEALING SECTIONS 9-40 THROUGH 9-158 REGARDING FLAMMABLE OR COMBUSTIBLE LIOUIDS, AS THEY ARE OUTDATED; ADDING A NEW SECTION 9,202 - FIRE ALARM ACTIVATION; AMENDING SECTION 9.204 FIRE DEPARTMENT ACCESS: PROVIDING FOR A PENALTY AND **PUBLICATION**; SETTING **FORTH** AND OTHER PROVISIONS RELATED THERETO.

WHEREAS, the City of Alvin, Texas (the "City") is a Home Rule City possessing the full power of local self-government pursuant to Article 11, Section 5 of the Texas Constitution, Section 51.072 of the Texas Local Government Code, and the City's Home Rule Charter; and

WHEREAS, the adoption of the 2018 Edition of the International Fire Code ("IFC"), including the local amendments, will provide the most current life safety applications with respect to construction, occupancy, use and maintenance of buildings and structures in the City of Alvin; and

WHEREAS, the City Council deems it to be in the best interest of the citizens of the City of Alvin to update its fire code standards and adopt the 2018 Edition of the IFC, as amended, as the minimum standard for the continued construction, occupancy, use and maintenance of buildings and structures within the City's jurisdictional authority; and

WHEREAS, the City Council desires to protect the public health, comfort, convenience, safety and welfare of the citizens of Alvin;

NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ALVIN, TEXAS:

Section 1. That the City Council of the City of Alvin, Texas, hereby adopts the findings and recitals set forth in the preamble hereof.

Section 2. That Chapter 9, <u>Fire Prevention and Protection</u>, of the Code of Ordinances, City of Alvin, Texas, is hereby amended, to read as follows:

FIRE PREVENTION AND PROTECTION ARTICLE I. IN GENERAL

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Sec. 9-5. - Discharge or sale of fireworks.

(a) *Definitions*. The following words, terms and phrases, when used in this section, shall have the meanings ascribed to them in this subsection, except where the context clearly indicates a different meaning:

Distributor means those who sell fireworks to retailers or to jobbers, for resale to others.

Fireworks means any composition or device designed to produce a visible or audible effect by combustion, explosion, deflagration, or detonation, such as firecrackers, cannon crackers, skyrockets, torpedoes, Roman candles, sparklers, squibs, fire balloons, skylanterns, star shells, gerbs, or any other substance in whatever combination by any designated name intended for use in obtaining visible or audible pyrotechnic display, and such term shall include all articles or substances within the commonly accepted meaning of fireworks, whether specifically designated and defined in this subsection or not.

Illegal fireworks means a fireworks device manufactured, distributed, used, sold, offered for sale, possessed, kept, discharged, ignited, detonated, or fired in violation of this section.

Importer means those who import fireworks from a foreign country for sale to distributors, jobbers, or retailers within the state.

Jobber means those who purchase fireworks for resale to consumers only.

Manufacturer means persons that are engaged in the making of fireworks.

Person means and includes any natural person, association of persons, partnership, corporation, agent, or officer of a corporation, or any other entity howsoever formed and shall also include all warehousemen, common and private carriers, bailees, trustees, receivers, executors, and administrators.

Public display means the igniting and shooting of fireworks for public amusements.

Retailer means those persons who purchase fireworks for resale to consumers only.

- (b) *General prohibition*. Except as otherwise specifically provided in this section, it shall be unlawful for any person to sell, offer to sell, or have in his possession with the intent to sell, keep, use, possess, discharge, ignite, detonate, fire, or otherwise set in action any fireworks of any description.
- (c) *Exceptions*. The general prohibitions set forth in subsection (b) shall not apply to the following:
 - (i) Subsection (b) shall not apply to toy pistols, toy canes, toy guns, or similar devices in which paper caps obtaining 0.0025 grains or less of explosive compounds are used, provided they are so constructed that the hand cannot come in contact with the cap when in place for exploding, and toy paper pistol caps which contain less than 0.0025 grains of explosive compounds, the sale and use of which shall be permitted at all times.
 - (ii) It shall not be unlawful, upon a permit issued by the fire marshal, for any person engaged in any organized play, legitimate theatrical performance, circus, or other show designed for the amusement and edification of the general public to use, discharge, or cause to be discharged and ignited fireworks as a part of an act, performance, play, or circus, so long as such person does not also engage in the retailing, wholesaling, selling, or distribution of any of such fireworks. The fire marshal shall cause to be made an investigation of each

- application made under this subsection to determine whether the use of such fireworks as proposed shall be of such a character that it may be hazardous to property or dangerous to any person; and he shall, in the exercise of reasonable discretion, grant or deny the application for such permit.
- (iii) Subsection (b) shall not apply to signal flares and torpedoes of the type and kind commonly used by any railroads, which signal flares and torpedoes are received by and stored or transported by any railroad operation; nor shall subsection (b) apply to any marine signal flare or rocket which is transported or received or stored for use only as ship's stores; nor shall subsection (b) apply to signal flares or rockets for military or police use; nor shall subsection (b) apply to signal flares for use by motorists in distress.
- (d) *Public display exempted*. The provisions of subsection (b) shall not apply to a public display of fireworks made under the terms and conditions of this subsection, and such display shall be permitted upon compliance with the provisions of the city's adopted Fire Prevention Code and of this subsection, as follows:
 - (i) Any adult person or any firm, co-partnership, corporation or association planning to make a public display of fireworks shall first make written application for a permit to the fire marshal at least forty eight (48) hours thirty (30) days in advance of the date of the proposed display.
 - (ii) It shall be the duty of the fire marshal to make an investigation as to whether the display as proposed by the applicant for a permit under this section shall be of such a character that it may be hazardous to property or dangerous to any person; and he shall, in the exercise of reasonable discretion, grant or deny the application, subject to the conditions prescribed in this subsection and the adopted Fire Prevention Code. If the application is approved, a permit shall be issued for the public display by the fire marshal. Such permit shall be for a period of time designated on the permit, but shall not exceed fourteen (14) days, and the permit shall not be transferable. If the application is denied by the fire marshal, he shall notify the applicant of the denial in writing.
 - (iii) The applicant for a display permit under this subsection shall, at the time of making application, furnish proof that he carries compensation insurance for his employees as provided by the laws of the state; and he shall file with the fire marshal a certificate of insurance evidencing the carrying of public liability insurance in an amount not less than three hundred thousand dollars (\$300,000.00), issued by an insurance carrier authorized to transact business in the state, for the benefit of the person named therein as insured, as evidence of ability to respond in damages in at least the amount of three hundred thousand dollars (\$300,000.00), such policy to be approved by the city manager. In lieu of insurance, the applicant may file with the fire marshal a bond in the amount of three hundred thousand dollars (\$300,000.00), issued by an authorized surety company approved by the city manager, conditioned upon the applicant's payment of all damages to persons or property which shall or may result from or be caused by such public display of fireworks or any negligence on the part of the applicant or his agents, servants, employees, or subcontractors in the presentation of the public display.
 - (iv) The range of aerial displays shall not be more than two hundred feet (200'), and the fireworks shall be discharged vertically from tubes approved by the fire marshal.
 - (v) The limit of a display authorized by this subsection shall be not more than forty-five (45) minutes per performance, and there shall not be more than two (2) performances in each twenty-four (24) hours.

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- (vi) No public display of fireworks shall be of such a character and so located, discharged, or fired as to be hazardous or dangerous to persons or property, and this determination shall be within the sound discretion of the fire marshal.
- (vii) The persons handling the display of fireworks under this subsection shall be competent, adult persons, and experienced licensed pyrotechnic operators approved by the fire marshal. No person not approved by the fire marshal shall handle fireworks at the public display. The names of the experienced pyrotechnic operators shall be designated on the permit issued.
- (viii) For each public display of fireworks under this subsection, the fire marshal may require that not less than two (2) firefighters of the Alvin Volunteer Fire Department be in attendance during the display. The expense of such firefighters at the display shall be borne by the applicant for the permit and shall be paid in advance at the time of the application for the permit.

(e) Illegal fireworks declared nuisance.

- (i) Except as otherwise provided in this section, the presence of any fireworks in violation of this section located within the city and within the area immediately adjacent and contiguous to the city limits extending for a distance outside of the city limits for a total of five thousand (5000) feet, is hereby declared to be a common and public nuisance. The fire marshal is directed to and shall seize any fireworks found in violation of this section, and any authorized deputy of the fire marshal, or any police officer of the city, or any other duly-constituted state peace officer is empowered to stop the transportation of illegal fireworks and to detain any persons with illegal fireworks or to close any building where any fireworks are found stored illegally until the fire marshal can be notified, in order that such fireworks may be seized in accordance with the terms of this section.
- (ii) Notwithstanding any penal provision of this section, the city attorney is authorized to file suit on behalf of the city, the fire marshal, or both, for such injunctive relief as may be necessary to prevent unlawful storage, transportation, keeping, or use of fireworks within the city-or within the five thousand (5000) foot area described in this section. It shall not be necessary to obtain injunctive relief as a prerequisite to seizure of fireworks.
- (iii) If any fireworks or combustibles are deemed by the fire marshal to be in such a state or condition as to constitute a hazard to life or property, the fire marshal may dispose of such fireworks or combustibles without further process of law. The fire marshal is authorized to dispose of any abandoned fireworks or combustibles that he deems to be hazardous to life or property.
- (iv) If a person charged is found guilty of violating the provisions of this section or any rule or regulation adopted pursuant thereto with regard to fireworks, the fire marshal is authorized to dispose of the confiscated material in such a way as he shall deem equitable.
- (f) Penalty for violation of section. Any person who shall violate this section shall be guilty of a misdemeanor which shall be punishable by a fine in an amount not to exceed two thousand dollars (\$2000.00) for each day of violation of this section.

Sec. 9-7. - False fire alarms.

No person shall knowingly give or make a false alarm of a fire within the corporate limits of the city.

Sec. 9-8. - Interference with firemen and other officials proceeding to fire.

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It shall be unlawful for any person to interfere with or in any manner obstruct any fireman or other city official proceeding to the scene or reported scene of any fire or to make it difficult or dangerous for any fireman or other city official to proceed to the scene of a fire.

Sec. 9-9. - Interference with fire apparatus and equipment generally.

It shall be unlawful for any person to deface, destroy, injure or molest any fire hose, hose reel, ladder, fire or chemical engine or other fire apparatus or equipment belonging to the city or to injure or deface any building or structure used to house or protect such apparatus and equipment or to interfere or meddle with any fire plug or hydrant within the city.

Sec. 9-10. - Standing, driving, etc., on or over fire hose or other apparatus.

It shall be unlawful for any person to stand or step upon or to drive or move any vehicle upon or across any fire hose, conductor or apparatus of the fire department of the city, except at the direction of a police officer or fireman.

Sec. 9-11. - Parking or driving vehicle near fire.

It shall be unlawful for any person to park any vehicle within five hundred (500) feet of any fire plug or reservoir where water is being obtained for fire fighting purposes or to park any vehicle within such distance of any place or location where a fire is in progress or to drive or operate any vehicle within such distance of a fire while it is in progress.

Sec. 9-12. - Duty of railroads to clear crossings for fire apparatus Reserved.

Whenever a fire alarm is sounded, the conductor or, in his absence, the engineer of any railway train which may be standing or moving across any railroad grade crossing of any street, road, highway or alley, which is the route selected as the most practical route to any fire for fire apparatus, shall immediately remove or cause to be removed or stop such train, if moving, and "cut" or disconnect the cars to open a passageway to such fire apparatus, and keep such passageway open to vehicular traffic for a period of at least five (5) minutes after the fire alarm has begun to sound. If such engineer or conductor has not heard the sound of such fire alarm, he shall immediately proceed to open such passageway upon being advised by any volunteer fireman, city official or other person apprizing him of the same.

Sec. 9-13. - Reward for arrest and conviction of arsonist.

The City of Alvin, Texas, hereby offers a reward of two hundred and fifty dollars (\$250.00) for the arrest and conviction of any person or persons found guilty of committing the crime of arson within the corporate limits of said City of Alvin, Texas.

This reward is a standing offer and shall be paid out of the general fund of the City of Alvin, Texas.

Sec. 9-14. - International Fire Code, 2009-2018 Edition, adopted; amendments.

- (a) Except as provided in this section, the International Fire Code, 2009-2018 Edition, published by the International Code Council, Inc., an authentic copy of which has been filed with the city clerkCity Secretary, is hereby adopted and made a part of this division, except as follows:
- (b) The reference to "fire code official" in the International Fire Code shall mean the "fire marshal," or a duly authorized representative charged with the duties of administration and enforcement of the code.

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- [(1) Reserved.]
- (2) Section 101.1 is hereby amended to read as follows:
 - 101.1 Title. These regulations shall be known as the Fire Code of the City of Alvin, Texas, hereinafter sometimes referred to as "this code."
- (3) Section 101.2.1 is hereby amended to read as follows:
 - 101.2.1 Appendices. All provisions in the appendices are hereby adopted.
- (4) Section 102.7 is hereby amended to read as follows:
 - 102.7. Referenced codes and standards. The codes and standards referenced in this code shall be those that are listed in Chapter 4780 hereof, and such codes and standards shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between the provisions of this code and the referenced standards, the provisions of the most restrictive shall apply. Whenever amendments have been adopted to the referenced codes and standards, each reference to said code and standard shall be considered to reference the amendments as well. This determination shall be made by the fire code official.
- (5) Section 103.2 is deleted.
- (6) Section 105.6.32 is amended by deleting the exception.
- (7) Section 108.5 is amended to read as follows:
 - 108.5 Rendering equipment inoperable.
 - (a) Portable or fixed fire-extinguishing systems or devices and fire-warning systems shall not be rendered inoperative or inaccessible except as necessary during emergencies, maintenance, repairs, alterations, drills or prescribed testing.
 - (b) No fire protection system may be taken out of service or allowed to remain out of service beyond normal working four (4) hours without the prior approval of the Fire Marshal. The Fire Marshal shall be notified prior to any fire sprinkler or standpipe system being temporarily or permanently removed from service. No operation protected by a fire suppression system may be used or operated while the fire suppression system is out of service.
- (8) Section 110.4 is amended to read as follows:
 - 110.4 Violation penalties. Persons who violate this code or who fail to comply with any of the requirements in this code, or who erect, install, alter, repair or do work in violation of the approved construction documents or contrary to the directives of the code official or in violation of a permit or certificate issued under provisions of this code, shall be assessed a fine up to \$2,000. Each day that a violation continues after due notice has been served shall be deemed a separate offense.
- (9) Section 112.4 is amended to read as follows:
 - 112.4 Failure to comply. Any person who continues work after having been served with a stop work order, except such work the code official has directed to be performed to remedy a violation or unsafe condition, shall be subjected to a fine not to exceed \$2,000.
- (10) Section 202. The following definitions in Section 202 are amended to read as follows:

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Facility. A building or use in a fixed location, including exterior storage areas, piers, wharves, tank farms, and similar uses. This term includes recreational vehicles, mobile home parks, manufactured housing parks, sales lots, and storage lots.

Fire Code Official. The fire marshal or a duly authorized representative charged with the duties of administration and enforcement of the code.

(11) Section 304.1.3.1 is amended to read as follows:

Section 304.1.3.1 Spaces under grandstands and bleachers shall not be utilized for purposes other than means of egress except where equipped with an automatic fire sprinkler system.

- (12) Section 315 is amended by creating the following subsection:
 - 315.1.1 High-piled combustible storage. High-piled combustible storage shall comply with section 3201.
- (13) Section 315.3.1 is amended by deleting the exception.
- (14) Section 401.1 is amended by deleting the exception.
- (15) Section 403 is amended by adding the following:
 - 403.1.1 Fees. Fire watch fees shall be paid upon completion of fire watch as specified in Chapter 28 of the City of Alvin Code of Ordinances.
 - 403.1.2 Enforceability. The Emergency Preparedness Requirements as described in 403.1 and approved by the fire code official, shall be complied with and is enforceable under provisions of this code. Any person, firm or corporation violating a provision of this section shall be guilty of a misdemeanor, and upon conviction shall be subject to a fine in accordance with the general penalty section 1-5 of the City of Alvin Code of Ordinances.
- (16) Section 503.1.1 is amended to read as follows:
 - 503.1.1. Buildings and Facilities. Approved fire apparatus access roads shall be provided for every facility, building, or portion of a building. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet (45,720 mm) of all portions of the facility or any portion of the exterior wall of the first story of the building as measured by an approved route around the exterior of the building or facility.

Exception: The fire code official is authorized to increase the dimension of 150 feet (45,720 mm) where:

- 1. The building is equipped throughout with an approved automatic sprinkler system installed in accordance with section 903.1.1.1, 903.3.1.2 or 903.3.1.3;
- 2. Fire apparatus access roads cannot be installed due to location on property, topography, waterways, non-negotiable grades or other similar conditions, and an approved alternative means of fire protection is provided; or
- 3. There are not more than two Group R-3 or Group U occupancies.
- (17) Section 504 is amended to add a new subsection 504.4 to read as follows:

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504.4 Rear exterior building access. A building that is 40 feet or greater in depth shall have an exterior rear access door.

(18) Section 505.1 is amended to read as follows:

505.1. Address identification. All new and existing buildings, whether commercial or residential, fronting on any street or alley in the city shall be numbered by the owner thereof, according to the address assigned to said building by the city engineering department.

- (a) For residential homes, contrasting numbers will be laced on the residence that is facing the street. If curbs are present, the numbers will be painted on the curbs in block lettering with a white box background with black numbering. If a curb is not present, the numbers shall be posted on both sides of a free-standing mailbox in a clear and legible manner. If neither a curb nor free standing mailbox is present, or if the residence sits too far off of the roadway and is not visible from the street, numbers to the residence will be placed in the yard to show the address so it is visible from the street.
- (b) The owner(s) of apartments, condominiums, townhomes, patio homes, business and industrial complexes having a single or common street address shall have a numbering system to identify each individual unit in said complex. Numbers shall be affixed by the owner(s) to the entry door of each unit. Separate complex buildings containing two (2) or more individual units shall be identified by affixing a building number or letter on two (2) sides of said building facing the nearest drivable approach. Numbers shall be affixed below said building identification number(s)/letter(s) representing the lowest through the highest numbered individual units contained in said building.
- (c) The owner(s) of hotels, motels, hospitals, nursing/retirement homes, private and public schools, or office buildings containing multi-offices shall affix numbers on each separate office, room, suite, etc., in said building(s). *Private/executive entrances to offices may be exempted by the fire code official.
- (d) The owner(s) of a mobile home park having a single or common street address shall identify each separate mobile home in said park by affixing numbers to the end or side of said mobile home that is most visible when approached by a vehicle. If the trailer park has multiple entrances and/or drives, the sign stating the numbers will be placed at the beginning of the row or drive to show what numbers are on the corresponding sides.
- (e) Number sizes, color, and maintenance:
 - (1) Commercial and residential street address numbers shall be no less than six (6) inches in height and one (1) inch in width.
 - (2) Residential street address numbers shall be no less than four (4) inches in height and 0.5 inches in width.
 - (3) Individual unit identification numbers on apartment/townhome/patio home/office doors shall be no less than four (4) inches in height and 0.5 inches in width.

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- (4) Complex building identification numbers/letters shall be no less than twelve (12) inches in height. Lowest and highest numbers affixed under the building identification shall be no less than four (4) inches in height. These numbers need to be in reflective numbering/lettering or be illuminated at night.
- (5) Numbers identifying individual units of a multi-unit business/industrial complex having outside entrances shall be no less than four (4) inches in height.
- (6) All numbers/letters shall be of contrasting color from the surface to which they are mounted and need be reflective if so required.
- (7) Numbers/letters shall be properly maintained so that they are clearly visible at all times.
- (f) Owners shall be provided sixty (60) days notice to become in compliance.
- (g) If not in compliance after sixty (60) days, a person will be considered to be in violation of this section and shall be guilty of a misdemeanor which shall be punishable by a fine of not less than two hundred dollars (\$200.00) nor more than two thousand dollars (\$2,000.00).
- (19) Section 507.5.1 is amended to read as follows:
 - 507.5.1 Where Required. Where a portion of the facility or building hereafter is constructed or moved into or within the jurisdiction is more than three hundred (300) feet from a hydrant on a fire apparatus road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the code official.
- (20) Section 507.5.1 is amended by deleting the exceptions.
- (21) Section 507.5.1.1 is amended to read as follows:
 - 507.5.1.1 Hydrant for stand pipe systems. Buildings equipped with a standpipe system installed in accordance with Section 905 shall have a fire hydrant within fifty (50) feet.
- (22) Section 507.5.1.1 is amended by deleting the exception.
- (23) Section 507.5.2 is amended to read as follows:
 - 507.5.2.1. Cost—The cost of maintaining fire hydrants on private property will be the burden of the occupant and/or owner of that property.
- (24) Section 507.5.7 is amended by adding the following:
 - 507.5.7. Marking. All fire hydrants located in the city shall be identified with a blue reflector affixed to the pavement so that a hydrant is readily visible to arriving fire companies. On unpaved streets, a blue reflector shall be affixed to a post as close as practicable to the edge of the roadway so as to be visible. Specifications of type and placement of markers shall be obtained from the fire prevention office.
- (25) Section 604.5.1 is amended to read as follows:

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- 604.5.1. Power supply. Extension cords shall be plugged directly into an approved receptacle and, except for approved multi-plug extension cords, shall serve only one portable appliance.
- (26) Section 604.10 is amended by to read as follows:
 - 604.10. Portable, electric space heaters. Portable, electric space heaters are prohibited in all occupancies except for one and two family dwellings.
- (27) Section 903.1.2 is amended to read as follows:
 - 903.1.2. An approved automatic fire sprinkler system meeting the requirements of section 903 shall be installed in buildings as follows:
 - (a) All buildings having a fire area exceeding 12,000 sq. ft.

 Exception: If there is a conflict between this section and other sections of this code, the most restrictive requirement shall apply.
 - (b) Any building constructed after October 20, 2005 that exceeds 20,000 sq. ft. or any attached construction, alteration, or addition to an existing structure of any group that causes the structure to exceed 20,000 sq. ft. For purposes of this section, an automatic fire sprinkler system shall be installed in the non-conforming or existing structure in addition to the new construction area.
- (28) Section 903.2 is amended to read as follows:
 - 903.2 Where required. Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in this section or when the gross square footage of the building or structure exceeds twelve thousand (12,000) square feet.
- (29) Section 903.2.1.5.1 is amended by adding the following:
 - 903.2.1.5.1 Spaces under grandstands and bleachers. Enclosed spaces under grandstands and bleachers shall be, equipped with an automatic sprinkler system in accordance with Section 903.1.1.
- (30) Section 903.2.6 is amended by adding the following:
 - 903.2.6.1 Facilities housing individuals incapable of self-preservation. Any facility, other than a foster home that houses individuals that are incapable of self-preservation, as defined by the Life Safety Code, N.F.P.A. 72 fire alarm and N.F.P.A. 13 automatic sprinkler.

Exception:

- 1. In the case of a personal care facility, child-care, group home or in-home residential child care that houses fewer than six clients, including a person who is incapable of self-preservation, a 13 R or 13 D automatic sprinkler shall be acceptable.
- In the case of a personal care facility, child-care, group home, or in-home residential
 child care that houses fewer than six clients, including a person who is incapable of
 self-preservation, a residential automatic fire alarm system with smoke detection
 shall be acceptable.
- (27) Section 903.2.6 is amended by adding the following:

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903.2.6.2 Inspection by Fire Marshal. The City of Alvin Fire Marshal or their designee shall inspect all registered and licensed personal care facilities, foster care facilities, foster care, child-care, and group homes within the City of Alvin for compliance with the fire code.

(28) Section 903.2.8 is amended to read as follows:

903.2.8 Group R. An automatic sprinkler system shall be provided throughout all buildings with a Group R occupancy fire area, including attached balconies, storage closets, patios, porches, breezeways, car ports, and porte chaches, regardless of fire separations.

(29) Section 903.3.7 is amended to read as follows:

903.3.7 Fire Department connections. The fire department connection (FDC) shall be located at a point no further than twenty (20) feet from a fire apparatus access road, remotely located at a horizontal distance that is greater than the height of the building on the main street side, and easily accessible to the Fire Department. The location of the FDC shall be such so as to provide hose connections that shall not block access to the building or obstruct other fire apparatus from accessing the building. There shall be an approved sign as specified by the Fire Marshal designating the address served by the FDC. A fire hydrant shall be located within fifty feet (50) feet of the FDC measured along a fire apparatus road.

(30) Section 905.5 is amended to read as follows:

905.5.1 Groups A-1 and A-2. In Group A-1 and A-2 occupancies with occupant loads of more than 500, Class I or Class III hose connections shall be located on each side of any stage, on each side of the rear of auditorium, on each side of the balcony, and on each tier of dressing rooms.

(31) Section 907.1.2 is amended to read as follows:

907.1.2.1 All new fire alarm systems installed in structures with more than one story, or larger than five thousand (5,000) square feet shall be addressable and communication devices shall be compatible for emergency force notification. The system shall have occupant notification throughout the building in compliance with ADA requirements, and manual pull stations with audible tamper covers shall be required by all exits regardless of any conflicting provision in the code.

(32) Section 907.2.1.1 is amended to read as follows:

907.2.1.1 System initiation in Group A occupancies with an occupant load of 300 or more. All new and existing assembly buildings with and occupant load of 300 or greater shall install Emergency Voice Evacuation (EVAC) systems in accordance with NFPA 72.

(33) Section 907.6.6 is amended to read as follows:

907.6.6 Monitoring. Where required by this chapter, an approved supervising station in accordance with NFPA 72 shall monitor fire alarm systems. All alarm activations monitored by an approved supervising station shall not be subject to pre-qualification. Instead, the fire department shall immediately be notified of all alarm activations.

(34) Section 1029.1.1.1 is amended to read as follows:

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- 1029.1.1.1 Spaces under grandstands and bleachers. Enclosed spaces under grandstands and bleachers shall be equipped with an automatic sprinkler system in accordance with Section 903.3.1.1.
- (35) Section 1029.1.1.1 is amended by deleting the exception.
- (36) Section 2804.1 is amended by adding the following section:
 - 2804.1.1 Facilities covered under Chapter 2804 shall have sufficient water supply and equipment to self-sustain fire extinguishment within one hour of fire department response.
- (37) Section 3107.12.4 is amended to read as follows:
 - 3107.12.4 Operations such as warming of foods, cooking demonstrations, and similar operations that use solid flammables, butane, or other similar devices which do not pose an ignition hazard may be approved.
- (38) Section 3405.8 is amended to read as follows:
 - 3405.8 Off-Loading of Trucks. All incoming tires by truck or trailer shall be off-loaded within four (4) hours and worked into stock on non-combustible racks as required for all tire storage. Tires are not to be left on the ground at the end of the workday and the truck or trailer transporting the incoming tires shall be removed from the site immediately following off-loading.
- (39) *Section 5704* is amended to add new subsections 5704.2.7.1.1, 5704.2.7.1.2, 5704.2.7.1.3, 5704.2.7.1.4 and 5704.2.7.1.5 to read as follows:
 - 5704.2.7.1.1. Vaulted aboveground tanks shall consist of an interior steel tank which is U.L. listed in accordance with U.L. Standard 142 "Steel Aboveground Tanks for Flammable and Combustible Liquids" and a secondary containment liner located within the concrete vault. The entire vaulted tank assembly shall be U.L. listed in accordance with U.L. Subject 2085, Protected Type.
 - 5704.2.7.1.2. All interior steel tanks of vaulted aboveground tanks shall meet the requirements of NFPA 30 for aboveground tanks including those for venting.
 - 5704.2.7.1.3. All steel tank openings within the vaulted aboveground tanks shall be threaded except for detector tubes.
 - 5704.2.7.1.4. All portions of the interior steel tank within the vaulted aboveground tank, and secondary containment liner, shall be enclosed in no less than six (6) inches of reinforced concrete with all openings located above the normal liquid level.
 - 5704.2.7.1.5. All vaults for vaulted aboveground tanks shall meet the following requirements:
 - 1. Be placed on a reinforced concrete pad adequate to support the loading of a full vault in accordance with manufacturers' recommendations;
 - 2. Have a five gallon minimum over-fill containment;
 - 3. Have leak detection devices installed and operational at all times.

(40) Section 5706.2.4.4 is amended to read as follows:

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5706.2.4.4 Locations where aboveground tanks are prohibited. The storage of Class I and II liquids in aboveground tanks is prohibited unless otherwise approved by the fire official. The aggregate capacity of any one installation shall not exceed a water capacity of 2,000 gallons, unless otherwise approved by the fire official.

(41) Section 6104.2 is amended to read as follows:

6104.2 Maximum capacity within established limits. Tanks are prohibited unless otherwise approved by the fire official. The aggregate capacity of any one installation shall not exceed a water capacity of 2,000 gallons, unless otherwise approved by the fire official.

(42) Chapter 80 Reference Standards is amended to include the following:

Buildings, installations, equipment, processes or procedures not specifically provided for in the International Fire Code shall comply with the most recent standards of National Fire Protection Association (NFPA) Chapter 1 The National Fire Code or Chapter 101 The Life Safety Code.

Sec. 9-15. - Storage of liquified petroleum gas and containers in multifamily dwellings, etc.

- (a) *Application*. This section shall apply to all structures, buildings or premises used or designed for multifamily dwellings, apartment houses, condominiums, hotels or motels.
- (b) *Prohibition*. No person shall store, place or keep liquified petroleum gas, or any container designed or used to contain liquified petroleum gas, in any of the following locations:
 - (1) Upon any balcony;
 - (2) Within any building;
 - (3) Within twenty (20) ten (10) feet of any residential building; or
 - (4) Within twenty (20) ten (10) feet of any adjoining property line.
- (c) *Defense*. It shall not be a defense to this section that such balcony or building is actually used by only a single family or residential unit; provided, that such balcony or building is part of a building or structure described herein.

Sec. 9-16. - Incinerators and barbecue pits in multifamily dwellings, etc.

- (a) *Application*. This section shall apply to all structures, buildings or premises used or designed for multifamily dwellings, apartment houses, condominiums, hotels or motels.
- (b) *General prohibition*. No person shall construct, erect, install, maintain or use any incinerator or barbecue pit, or burn any combustible material, so as to constitute or cause a fire hazard, or so as to endanger the life or property of any person.
- (c) *Incinerators or barbecue pits, etc., prohibited.* No person shall construct, erect, install, maintain or use any incinerator or barbecue pit, or burn any combustible material under any of the following conditions, each of which is hereby found to specifically constitute a fire hazard:
 - (1) Within five (5) ten (10) linear feet of any combustible surface, including, but not limited to, a deck, a porch, a balcony, a wall or a veranda; or

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- (2) Beneath any balcony, porch, roof overhand, deck or veranda.
- (d) *Exception for electric barbecue pits*. Electric barbecue pits are excepted from this section, provided that they have no open flame and they are equipped with, and there is present, a noncombustible metal lid, with a handle, fitting over the entire cooking surface.

Sec. 9-17. - Fire hazard found and offense fixed.

- (a) The city council finds that any violation of sections 9-15, 9-16 and this section constitutes a fire hazard and a danger to property and human life, and a danger to the health, safety and welfare of the people of the city.
- (b) Any person violating any of the provisions herein shall be guilty of an offense. A person shall be guilty of an offense if such person:
 - (1) Owns, operates, occupies, leases, lets or controls any premises described herein, and
 - (2) Such person either:
 - a. Knowingly permits any violation of any provision herein on such premises; or
 - b. Fails to take immediate action to abate any violation of any provision herein on such premises when ordered or notified to do so by the fire marshal or his duly authorized representative.

Neither this section nor sections 9-15 or 9-16 shall impair any other ordinances providing offenses or penalties.

Secs. 9-18, 9-19. - Reserved.

ARTICLE II. - FIRE MARSHALL

Sec. 9-20. Office created independent of other departments under the Fire Administrator/Fire Chief.

The office of fire marshal is hereby created, the <u>The</u> fire marshal shall be appointed by the city manager report to the Fire Administrator/Fire Chief.

Sec. 9-21. - Reserved.

Sec. 9-22. - Qualifications; removal.

The fire marshal shall be properly qualified certified by the Texas Commission on Fire

Protection and Texas Commission on Law Enforcement for the duties of his/her office and shall be removed only for cause.

. . .

Sec. 9-29. - Inspection of premises; removal or repair of dangerous conditions.

The fire marshal, upon complaint of any person having an interest in any building or property adjacent, and without any complaint, shall have a right at all reasonable hours, for the purpose of examination, to enter into and upon all buildings and premises within the city, and it shall be his the Fire Marshal's duty, monthly annually or more often, to enter upon and make or cause to be

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entered and made, a thorough examination of all mercantile, manufacturing and public buildings, together with the premises belonging thereto. Whenever he the fire marshal shall find any building or other structure which, for want of repair, or by reason of age or dilapidated condition, or for any cause, is especially liable to fire, and which is so situated as to endanger other buildings or property, or so occupied that fire would endanger persons or property therein, and whenever he the fire marshal shall find an improper or dangerous arrangement of stoves, ranges, furnaces or other heating appliances of any kind whatsoever, including chimneys, flues and pipes with which the same may be connected, or a dangerous arrangement of lighting devices or systems, or a dangerous or unlawful storage of explosives, compounds, petroleum, gasoline, kerosene, dangerous chemicals, vegetable products, ashes, combustible, inflammable and refuse materials, or other conditions which may be dangerous in character or liable to cause or promote fire or create conditions dangerous to the firemen or occupants, he the fire marshal shall order the same to be removed or remedied, and such order shall be forthwith complied with by the owner or occupant of the building or premises. If such owner or occupant deems himself themselves aggrieved by such order, he they may, within five (5) days, appeal to the city council Building Board of Adjustments and Appeals, which shall investigate the cause of the complaint and, unless by its authority the order is revoked, such order shall remain in force and be forthwith complied with by the owner or occupant. Any owner or occupant who fails to comply with such notice shall be guilty of a misdemeanor.

Sec. 9-30. - Right of entry.

The fire marshal shall have the authority, at all times of day or night, when necessary in the performance of the duties imposed upon him by the provisions of this article, to enter upon and examine any building or premises where any fire has occurred, and other buildings and premises adjoining or near the same, which authority shall be exercised only with reason and good discretion.

Sec. 9-31. - Records to be kept.

The <u>fire marshal Fire Administrator/Fire Chief or their designee shall be responsible for keeping records shall keep in his office a record of all fires, together with all facts, statistics and circumstances, including the origin of the fires and the amount of loss, which may be determined by the investigation required by this article.</u>

Sec. 9-32. - Monthly reports to state fire marshal.

At the end of each month, the fire marshal Annually, the Fire Administrator/Fire Chief or their designee shall report to the state fire marshal all existing hazardous conditions, together with a separate report on each fire in the city during the month.

Secs. 9-33—9-38. - Reserved.

ARTICLE III. - FLAMMABLE OR COMBUSTIBLE LIQUIDS

DIVISION 1. – GENERALLY

Sec. 9-39. - Applicability of article; violation.

Buildings, installations, equipment, processes or procedures involving the storage, handling or use of flammable or combustible liquids and not specifically provided for in the International

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Fire Code shall comply with the most recent standards in Chapter 30 of the Flammable & Combustible Liquids Code, National Fire Protection Association (NFPA).

- (a) This article shall apply to all persons, firms, corporations, co-partnerships, governmental agencies except federal, and voluntary associations storing, handling or using flammable or combustible liquids and to the owner or lessee of any building, premises, or equipment in or on which flammable or combustible liquids are stored, handled, or used.
- (b) Any person, firm, corporation, co-partnership or other business entity which fails to comply with this article shall be guilty of a misdemeanor.

(Ord. No. 66-V, § 1, 1-5-67)

Sec. 9-40. Compliance required; applicability to existing service.

Any plants, store, equipment, building, structure or installation for the storage, handling, or use of flammable or combustible liquids which is in service as of January 5, 1967, and which is not in strict compliance with the provisions of this article, may be continued in such use unless the fire marshal finds that such use constitutes a distinct hazard to life or adjoining property. When the fire marshal deems that the continued use will constitute a distinct hazard to life or adjoining property, he shall notify the owner or operator of such facility and specify reasons in writing.

(Ord. No. 66-V, § 2, 1-5-67)

Sec. 9-41. - Modification; granting of exemptions.

The city council shall have the power to grant exemption from application of the article upon request in writing so to do when such request shows that the enforcement of the article will cause unnecessary hardship to the petitioner, provided that said request shall not be granted where the requested use will constitute a distinct hazard to life or adjoining property. The particulars of such exemptions when granted shall be entered upon the approval granted. A copy thereof shall be retained by the city manager.

(Ord. No. 66-V, § 5, 1-5-67)

Sec. 9-42. - Definitions.

Atmospheric tank shall mean a storage tank which has been designed to operate at pressures from atmospheric through 0.5 psig.

Automotive service station shall mean that portion of a property where flammable or combustible liquids used as motor fuels are stored and dispensed from equipment into the fuel tanks of motor vehicles.

Barrel shall mean a volume of forty-two (42) U.S. gallons.

Boiling point shall mean the boiling point at a pressure of 14.7 psia (760 mm). Where an accurate boiling point is unavailable for the material in question, or for mixtures which do not have a constant boiling point, for purposes of this article the 10 percent point of a distillation performed in accordance with the Standard Method of Test for Distillation of Petroleum Products, ASTM D-86-62, may be used as the boiling point of the liquid.

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Boil-over shall mean the expulsion of crude oil (or certain other liquids) from a burning tank. The light fractions of the crude oil burn off producing a heat wave in the residue, which on reaching a water strata may result in the expulsion of a portion of the contents of the tank in the form of froth.

Bulk plant shall mean that portion of a property where flammable liquids are received by tank vessel, pipe lines, tank car, or tank vehicle, and are stored or blended in bulk for the purpose of distributing such liquids by tank vessel, pipe line, tank car, tank vehicle, or container.

Chemical plant shall mean a large integrated plant or that portion of such a plant other than a refinery or distillery where flammable or combustible liquids are produced by chemical reactions or used in chemical reactions.

Closed container shall mean a container as herein defined, so sealed by means of a lid or other device that neither liquid nor vapor will escape from it at ordinary temperatures.

Combustible liquids (See Liquids).

Container shall mean any can, barrel or drum.

Crude petroleum shall mean hydrocarbon mixtures that have a flashpoint below 150° F. and which have not been processed in a refinery.

Distillery shall mean a plant or that portion of a plant where flammable or combustible liquids produced by fermentation are concentrated, and where the concentrated products may also be mixed, stored, or packaged.

Flash point of the liquid shall mean the temperature at which it gives off vapor sufficient to form an ignitable mixture with the air near the surface of the liquid or within the vessel used as determined by appropriate test procedure and apparatus as specified below.

- (a) The flash point of liquids having a flash point at or below 175°F. (79°C.), except for fuel oils and certain viscous materials, shall be determined in accordance with the Standard Method of Test for Flash Point by the Tag Closed Tester, ASTM D-56-61.
- (b) The flash point of liquids having a flash point above 175°F., except for fuel oils, shall be determined in accordance with the Standard Method of Test for Flash Point by the Cleveland Open Cup Tester, ASTM D-92-57.
- (c) The flash point of fuel oil, and certain viscous materials having a flash point at or below 175°F., shall be determined in accordance with the Standard Method of Test for Flash Point by the Pensky-Martens Closed Tester, ASTM D-93-62.

Liquid shall mean, when not otherwise identified, to include both flammable and combustible liquids.

Combustible liquid shall mean any liquid having a flash point at or above 140°F. (60°C.) and shall be known as Class III Liquids. Class IIIA shall include those having flash points at or above 140°F. (60°C.) and below 200°F. (93.4°C.) Class IIIB shall include those having flash points at or above 200°F. (93.4°C.). This article does not cover Class IIIB liquids. Where the term combustible liquids or Class III liquids is used in this article, it shall mean only Class IIIA liquids.

Flammable liquids shall mean any liquid having a flash point below 140°F. and having a vapor pressure not exceeding 40 pounds per square inch (absolute) at 100°F. Flammable liquids shall be divided into two classes of liquids as follows:

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- CLASS I liquids shall include those having flash points below 100°F. and may be subdivided as follows:
- CLASS IA shall include those having flash points below 73°F. and having a boiling point below 100°F.
- CLASS IB shall include those having flash points below 73°F. and having a boiling point at or above 100°F.
- CLASS IC shall include those having flash points at or above 73°F. and below 100°F.
- CLASS II liquids shall include those having flash points at or above 100°F, and below 140°F. (The volatility of liquids is increased when artificially heated to temperatures equal to or higher than their flash points. When so heated Class II and Class III liquids shall be subject to the applicable requirements for Class I or II liquids.

This article may also be applied to high flash point liquids when so heated even though these same liquids when not heated are outside of its scope.)

Unstable (reactive) liquid shall mean a liquid which in the pure state or as commercially produced or transported will vigorously polymerize, decompose, condense or will become self-reactive under conditions of shock, pressure or temperature.

Low pressure tank shall mean a storage tank which has been designed to operate at pressures above 0.5 psig but not more than fifteen (15) psig.

Pressure vessel shall mean a storage tank or vessel which has been designed to operate at pressures above fifteen (15) psig.

Protection for exposures shall mean fire protection for structures on property adjacent to tanks. Structures located within the city limits or within or adjacent to plants having private fire brigades shall be considered as having adequate protection for exposures.

Refinery shall mean a plant in which flammable or combustible liquids are produced on a commercial scale from crude petroleum natural gasoline, or other hydrocarbon sources.

Safety can shall mean an approved container, of not over five gallons capacity, having a spring-closing lid and spout cover and so designed that it will safely relieve internal pressure when subjected to fire exposure.

Vapor pressure shall mean the pressure, measured in pounds per square inch (absolute) exerted by a volatile liquid as determined by the "Standard Method of Test for Vapor Pressure of Petroleum Products (Reid Method)", ASTM D-323-58.

Ventilation as specified in this article is for the prevention of fire and explosion. It is considered adequate if it is sufficient to prevent accumulation of significant quantities of vapor-air mixtures in concentration over one-fourth of the lower flammable limit.

(Ord. No. 66-V, § 6, 1-5-67)

Cross reference—General rules of construction, § 1-2.

Secs. 9-43 9-48. - Reserved.

DIVISION 2. - PERMIT

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Sec. 9-49. - Required.

A permit issued pursuant to this article shall be obtained from the city manager for any of the following:

- (a) Storage, handling or use of Class I liquids in excess of one gallon in a dwelling or other place of human habitation; or in excess of six (6) gallons in any other building or other occupancy; or in excess of ten gallons outside of any building; except that no approval shall be required for the following:
 - (1) For the storage or use of flammable or combustible liquids in the fuel tank or supplementary fuel containers of a motor vehicle, aircraft, motorboat, mobile power plant, or mobile heating plant.
 - (2) For the storage or use of paints, oils, varnishes, or similar flammable mixtures when such liquids are stored for maintenance, painting, or similar purposes for a period of not more than thirty (30) days.
- (b) Storage, handling, or use of Class II or Class III flammable liquids in excess of twenty-five (25) gallons in a building; or in excess of sixty (60) gallons outside of a building.
- (c) For the manufacture, processing, blending, or refining of flammable or combustible liquids.
- (d) For the storage of flammable or combustible liquids in stationary tanks.

(Ord. No. 66-V, § 3, 1-5-67)

Sec. 9-50. - Application, inspection and approval prerequisite to issuance.

Application for approval to construct or erect facilities for the storage, handling, or use of flammable or combustible liquids as herein required shall be made in writing to the city secretary. The fire marshal shall then cause to be made an inspection of the premises and equipment proposed to be used. If they are found to be in compliance with this article, a statement to that effect shall be noted on the application and the application signed by the person making the inspection. The city manager shall thereupon grant approval as applied for.

Before operating any equipment or storing any flammable or combustible liquid, or covering the underground portions of any such equipment for which an approval is required, notification shall be given to the fire marshal and he shall, within two (2) working days thereof, cause such premises or equipment to be inspected.

The fire marshal may at any reasonable time inspect premises, buildings, installations, or equipment for the storage, handling, or use of flammable or combustible liquids. If a violation of this article is found to exist, he shall file with the owner, occupant, or operator, a notice citing the violation and ordering its correction. If such order is not complied with, the city manager may suspend the approval granted for such facility.

Containers, tanks, equipment and apparatus meeting the standards of nationally recognized inspection or test laboratories shall be considered as meeting the requirements of this section.

Buildings, installations, equipment, processes or procedures involving the storage, handling or use of flammable or combustible liquids and not specifically provided for in this section shall

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comply with standards therefor as recommended in Pamphlet No. 30, Issue of 1966, National Fire Protection Association.

Cross reference—Inspection by fire marshal generally, § 9-29; right of entry, § 9-30.

Secs. 9-51 9-56. - Reserved.

DIVISION 3. - DESIGN AND CONSTRUCTION OF TANKS

Sec. 9-57. - Materials.

- (a) Tanks shall be built of steel except as provided in subsections (b), (c) and (d). Tanks may have combustible or noncombustible linings. Special engineering consideration shall be required if the specific gravity of the liquid to be stored exceeds that of water or if the tanks are designed to contain flammable or combustible liquids at a liquid temperature below zero degrees Fahrenheit.
- (b) Tanks may be built of materials other than steel for installation underground or if required by the properties of the flammable or combustible liquid stored. Tanks located aboveground or inside buildings shall be of noncombustible construction.
- (c) Tanks built of materials other than steel shall be designed to specifications embodying principles recognized as good engineering design for the material used and shall be approved by the fire marshal.
- (d) Unlined concrete tanks may be used for storing flammable or combustible liquids having a gravity of forty (40) degrees API or heavier. Concrete tanks with special lining may be used for other services provided the design is in accordance with sound engineering practice.
- (e) Tanks may have combustible or noncombustible linings.

(Ord. No. 66-V, § 7-1, 1-5-67)

Sec. 9-58. - Fabrication.

- (a) Tanks may be of any shape or type consistent with sound engineering design.
- (b) Metal tanks shall be welded, riveted and caulked, brazed, or bolted, or constructed by use of a combination of these methods. Filler metal used in brazing shall be nonferrous metal or an alloy having a melting point above 1000° F. and below that of the metal joined.

(Ord. No. 66-V, § 7-2, 1-5-67)

Sec. 9-59. Atmospheric tanks.

(a) Atmospheric tanks shall be built in accordance with approved standards of design. Atmospheric tanks may be built in accordance with:

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- (1) Underwriters' Laboratories, Inc., Subject No. 142, Standard for Aboveground Tanks for Flammable Liquids, 2nd Edition, October 1953; No. 58, Standard for Underground Storage Tanks, 5th Edition, December 1961; or No. 80, Standard for Inside Tanks for Oil-Burner Fuel, 4th Edition, February 1958.
- (2) American Petroleum Institute Standards No. 12a, Specifications for Oil Storage Tanks with Riveted Shell, 7th Edition, September 1951 or No. 650, Welded Steel Tanks for Oil Storage, 1st Edition, December 1961, and Supplement, February 1963. Tanks which incorporate an internal metal floating cover with a fixed metal roof with adequate ventilation at the eaves of the roof are considered floating roof tanks.
- (3) American Petroleum Institute Standards No. 12B, Specifications for Bolted Production Tanks, 11th Edition, May 1958 and Supplement I, March 1962; No. 12D, Specification for Large Welded Production Tanks, 7th Edition, August 1957; or No. 12F, Specification for Small Welded Production Tanks, 5th Edition, March 1961. Tanks built in accordance with these standards shall be used only as production tanks for storage of crude petroleum in oil producing areas.
- (b) Tanks designed for underground service not exceeding two thousand five hundred (2,500) gallons capacity may be used aboveground.
- (c) Low pressure tanks and pressure vessels may be used as atmospheric tanks.
- (d) Atmospheric tanks shall not be used for the storage of a flammable or combustible liquid at a temperature at or above its boiling point.

(Ord. No. 66-V, § 7-3, 1-5-67)

Sec. 9-60. - Low pressure tanks.

- (a) The normal operating pressure of the tank shall not exceed the design pressure of the tank.
- (b) Low pressure tanks shall be built in accordance with approved standards of design. Low pressure tanks may be built in accordance with:
 - (1) American Petroleum Institute Standard No. 620, Recommended Rules for the Design and Construction of Large, Welded, Low Pressure Storage Tanks, First Edition, February 1956 and Addenda February 1958.
 - (2) The Principles of the Code for Unfired Pressure Vessels, Section VIII of the ASME Boiler and Pressure Vessels Code. 1965 Edition.

Atmospheric tanks built according to Underwriter Laboratories', Inc. requirements in paragraph 7–31(a) may be used for operating pressures not exceeding 1 psig and shall be limited to 2.5 psig under emergency venting conditions.

Pressure vessels may be used as low pressure tanks.

(Ord. No. 66-V, § 7-4, 1-5-67)

Sec. 9-61. Pressure vessels.

The normal operating pressure of the vessel shall not exceed the design pressure of the vessel.

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Pressure vessels shall be built in accordance with the Code for Unfired Pressure Vessels, Section VIII of the ASME Boiler and Pressure Vessels Code, 1965 Edition.

(Ord. No. 66-V, § 7-5, 1-5-67)

Secs. 9-62 9-67. - Reserved.

DIVISION 4. - INSTALLATION OF OUTSIDE ABOVEGROUND TANKS

Sec. 9-68. - Location with respect to property lines and public ways.

(a) Every aboveground tank for the storage of flammable or combustible liquids, except those liquids with boil-over characteristics and unstable liquids, operating at pressures not in excess of 2.5 psig and equipped with emergency venting which will not permit pressures to exceed 2.5 psig shall be located in accordance with Table 1.

Table I

Type of - Tank	Protection	Minimum Distance in Feet from Property Line Which May be Built Upon, Including the Opposite Side of a Public Way	Minimum Distance in Feet from Nearest Side of Any Public Way or from Nearest Important Building
Floating Roof	Protection for exposures	½ times diameter of tank but need not exceed 90 feet	1/6 times diameter of tank but need not exceed 30 feet
- 10 00000	None	Diameter of tank but need not exceed 175 feet	1/6 times diameter of tank but need not exceed 30 feet
Vertical with Weak Roof to Shell Seam	Approved foam or inerting system on the tank	½ times diameter of tank but need not exceed 90 feet and shall not be less than 5 feet	1/6 times diameter of tank but need not exceed 30 feet and shall not be less than 5 feet

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	Protection for Exposures	Diameter of tank but need not exceed 175 feet	1/3 times diameter of tank but need not exceed 60 feet
	None	2 times diameter of tank but need not exceed 350 feet	1/3 times diameter of tank but need not exceed 60 feet
Horizontal and Vertical, with Emergency Relief	Approved inerting system on the tank or approved foam system on vertical tanks	½ times Table V but shall not be less than 5 feet	½ times Table V but shall not be less than 5 feet
Venting to Limit Pressures to 2.5 psig	Protection for Exposures	Table V	Table V
	None	2 times Table V	Table V

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(b) Every aboveground tank for the storage of flammable or combustible liquids, except those liquids with boil over characteristics and unstable liquids, operating at pressures exceeding 2.5 psig or equipped with emergency venting which will permit pressures to exceed 2.5 psig, shall be located in accordance with Table II.

Table II

Type of Tank	Protection	Minimum Distance in Feet from Property Line Which May be Built Upon, Including the Opposite Side of a Public Way	Minimum Distance in Feet from Nearest Side of Any Public Way or from Nearest Important Building
	Protection for Exposures	1½ times Table V but shall not be less than 25 feet	1½ times Table V but shall not be less than 25 feet
Any Type	None	3 times Table V but shall not be less than 50 feet	11/2 times Table V but shall not be less than 25 feet

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^{*}Special consideration may be given to tanks equipped with automatic depressuring systems.

(c) Every aboveground tank for the storage of flammable or combustible liquids with boil-over characteristics shall be located in accordance with Table III.

Table III

Type of Tank	Protection	Minimum Distance in Feet from Property Line Which May be Built Upon, Including the Opposite Side of a Public Way	Minimum Distance in Feet from Nearest Side of Any Public Way or from Nearest Important Building
Floating	Protection for Exposures	Diameter of tank but need not exceed 175 feet	1/3 times diameter of tank but need not exceed 60 feet
Roof	None	2 times diameter of tank but need not exceed 350 feet	1/3 times diameter of tank but need not exceed 60 feet
	Approved foam or inerting system	Diameter of tank but need not exceed 175 feet	1/3 times diameter of tank but need not exceed 60 feet
Fixed Roof	Protection for Exposures	2 times diameter of tank but need not exceed 350 feet	2/3 times diameter of tank but need not exceed 120 feet
	None	4 times diameter of tank but need not exceed 350 feet	2/3 times diameter of tank but need not exceed 120 feet

(d) Every aboveground tank for the storage of unstable liquids shall be located in accordance with Table IV.

Table IV

Type of - Tank	Protection	Minimum Distance in Feet from Property Line Which May be Built Upon, Including the Opposite Side of a Public Way	Minimum Distance in Feet from Nearest Side of Any Public Way or from Nearest
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			Important Building
Horizontal and Vertical Tanks with Emergency Relief Venting to Permit Pressure Not in Excess of 2.5 psig	Tank protected with any one of the following: Approved water spray, Approved inerting, Approved insulation and refrigeration, Approved barricade	Table V but not less than 25 feet	Not less than 25 feet
	Protection for Exposures	2½ times Table V but not less than 50 feet	Not less than 50 feet
	None	5 times Table V but not less than 100 feet	Not less than 100 feet
Horizontal and Vertical	Tank protected with any one of the following: Approved water spray, Approved inerting, Approved insulation and refrigeration, Approved barricade	2 times Table V but not less than 50 feet	Not less than 50 feet
Tanks with Emergency Relief Venting to Permit Pressure Over 2.5 psig	Protection for Exposures	4 times Table V but not less than 100 feet	Not less than 100 feet
	None	8 times Table V but not less than 150 feet	Not less than 150 feet

Table V

	Minimum Distance in Feet	Minimum Distance in Feet
Composites Touls	from Property Line	from Nearest Side of
Callana Callana	Which May be Built Upon,	Any Public Way or
- Gallons	Including the Opposite	from Nearest Important
	Side of a Public Way	Building

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——————————————————————————————————————	5	-5
——————————————————————————————————————	-10	_5
751 to 12,000	-15	-5
12,001 to 30,000	-20	-5
- 30,001 to 50,000	-30	10
50,001 to 100,000	-50	15
-100,001 to 500,000	-80	25
-500,001 to 1,000,000	100	35
1,000,001 to 2,000,000	135	45
2,000,001 to 3,000,000	165	55
3,000,001 or more	175	60

(e) Where two tank properties of diverse ownership have a common boundary, the city council may, with the written consent of the owners of the two properties, substitute the distances provided in subsections 9-69(a) through 9-69(f) for the minimum distances set forth in subsections 9-68(a) through 9-68(d).

(f) Where end failure of horizontal pressure tanks and vessels may expose property, the tank shall be placed with the longitudinal axis parallel to the nearest important exposure.

(Ord. No. 66-V, § 8-1, 1-5-67)

Cross reference Location of underground tanks, § 9-81.

Sec. 9-69. - Spacing (shell to shell) between aboveground tanks.

- (a) The distance between any two flammable or combustible liquids storage tanks shall not be less than three (3) feet.
- (b) Except as provided in subsection (c), the distance between adjacent tanks shall not be less than one sixth the sum of their diameters, except when the diameter of one tank is less than one half the diameter of the adjacent tank, the distance between the two (2) tanks shall not be less than one half the diameter of the smaller tank.

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- (c) Crude petroleum in conjunction with production facilities located in noncongested areas and having capacities not exceeding one hundred twenty six thousand (126,000) gallons (three thousand (3,000) barrels), the distance between such tanks shall not be less than three (3) feet.
- (d) Unstable or combustible liquids, the distance between such tanks shall be not less than one-half the sum of their diameters.
- (e) When tanks are compacted in three or more rows or in an irregular pattern, greater spacing or other means shall be provided at the discretion of the city manager so that inside tanks are accessible for fire fighting purposes.
- (f) The minimum separation between a liquefied petroleum gas container and a flammable or combustible liquid storage tank shall be twenty (20) feet, except in the case of flammable or combustible liquid tanks operating at pressures exceeding 2.5 psig or equipped with emergency venting which will permit pressures to exceed 2.5 psig in which case the provisions of subsections (a) and (b) shall apply. Suitable means shall be taken to prevent the accumulation of flammable or combustible liquids under adjacent liquefied petroleum gas containers such as by diversion curbs or grading. When flammable or combustible liquid storage tanks are within a diked area, the liquefied petroleum gas containers shall be outside the diked area and at least ten (10) feet away from the centerline of the wall of the diked area. The foregoing provisions shall not apply when liquefied petroleum gas containers of one hundred twenty-five (125) gallons or less capacity are installed adjacent to fuel oil supply tanks of five hundred fifty (550) gallons or less capacity.

(Ord. No. 66-V, § 8.2, 1-5-67)

Sec. 9-70. - Normal venting for aboveground tanks.

- (a) Atmospheric storage tanks shall be adequately vented to prevent the development of vacuum or pressure sufficient to distort the roof of a cone roof tank or exceeding the design pressure in the case of other atmospheric tanks, as a result of filling or emptying, and atmospheric temperature changes.
- (b) Normal vents shall be sized either in accordance with:
 - (1) The American Petroleum Institute Guide for Tank Venting, RP-2000; or
 - (2) Other accepted standard; or
 - (3) Shall be at least as large as the filling or withdrawal connection, whichever is larger but in no case less than 1¼-inch nominal inside diameter.
- (c) Low-pressure tanks and pressure vessels shall be adequately vented to prevent development of pressure or vacuum, as a result of filling or emptying and atmospheric temperature changes from exceeding the design pressure of the tank or vessel. Protection shall also be provided to prevent over pressure from any pump discharging into the tank or vessel when the pump discharge pressure can exceed the design pressure of the tank or vessel.
- (d) If any tank or pressure vessel has more than one fill or withdrawal connection and simultaneous filling or withdrawal can be made, the vent size shall be based on the maximum anticipated simultaneous flow.
- (e) Unless the vent is designed to limit the internal pressure 2.5 psi or less, the outlet of vents and vent drains shall be arranged to discharge in such a manner as to prevent localized overheating of any part of the tank in the event vapors from such vents are ignited.

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(f) Tanks and pressure vessels storing Class IA liquids shall be equipped with venting devices which shall be normally closed except when venting to pressure or vacuum conditions. Tanks and pressure vessels storing Class IB and IC liquids shall be equipped with venting devices which shall be normally closed except when venting under pressure or vacuum conditions, or with approved flame arresters.

Exception. Tanks of 3,000 bbls. capacity or less containing crude petroleum in crude-producing areas; and, outside aboveground atmospheric tanks under 1,000 gallons capacity containing other than Class IA flammable liquids may have open vents.

(g) Flame arresters or venting devices required in Paragraph (f) may be omitted for IB and IC liquids where conditions are such that their use may, in case of obstruction, result in tank damage.

Note. Liquid properties justifying the omission of such devices include, but are not limited to, condensation, corrosiveness, crystallization, polymerization, freezing or plugging. When any of these conditions exist, consideration may be given to heating, use of devices employing special materials of construction, the use of liquid seals, or inerting (see Standard for Inerting for Fire and Explosion Prevention, NFPA No. 69).

(Ord. No. 66-V, § 8.3, 1-5-67)

Sec. 9-71. - Emergency relief venting for fire exposure for aboveground tanks.

- (a) Every aboveground storage tank shall have some form of construction or device that will relieve excessive internal pressure caused by exposure fires.
- (b) In a vertical tank this construction referred to in subsection (a) may take the form of a floating roof, lifter roof, a weak roof-to-shell seam, or other approved pressure relieving construction. The weak roof to shell seam shall be constructed to fail preferential to any other seam.
- (c) Where emergency venting is by relief device instead of construction, the total capacity of both normal and emergency venting devices shall not be less than required by the edition of Standard No. 30 of the National Fire Protection Association, issue of 1966.

(Ord. No. 66-V, § 8.4, 1-5-67)

Sec. 9-72. - Vent piping for aboveground tanks.

- (a) Vent piping shall be constructed in accordance with section 9-119 through 9-127.
- (b) Where vent pipe outlets for tanks storing Class I liquids are adjacent to buildings or public ways, they shall be located so that the vapors are released at a safe point outside of buildings and not less than twelve (12) feet above the adjacent ground level. In order to aid their dispersion, vapors shall be discharged upward or horizontally away from closely adjacent walls. Vent outlets shall be located so that flammable vapors will not be trapped by eaves or other obstructions and shall be at least five feet from building openings.
- (c) When tank vent piping is manifolded, pipe sizes shall be such as to discharge, within the pressure limitations of the system, the vapors they may be required to handle when manifolded tanks are subject to the same fire exposure.

(Ord. No. 66-V, § 8.5, 1-5-67)

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Sec. 9-73. - Drainage, dikes and walls for aboveground tanks.

- (a) Generally. The area surrounding a tank or a group of tanks shall be provided with drainage as specified in subsection (b) or shall be diked as in subsection (c) to prevent accidental discharge of liquid from endangering adjoining property or reaching waterways, except that in particular installations these provisions may be waived or altered at the discretion of the fire marshal when the tanks under consideration do not constitute a hazard to adjoining property.
- (b) *Drainage*. Where protection of adjoining property or waterways is by means of a natural or man-made drainage system, such system shall comply with the following:
 - (1) A slope of not less than one (1) percent away from the tank toward the drainage system shall be provided.
 - (2) The drainage system shall terminate in vacant land or other area or in an impounding basin having a capacity not smaller than that of the largest tank served. This termination area and the route of the drainage system shall be so located that, if the flammable or combustible liquids in the drainage system are ignited, the fire will not seriously expose tanks or adjoining property.
 - (3) The drainage system, including automatic drainage pumps, shall not discharge to adjoining property, natural watercourses, public sewers, or public drains unless the discharge of flammable or combustible liquids would not constitute a hazard, or the system is so designed that it will not permit flammable or combustible liquids to be released.
- (c) Dikes and walls. Where protection of adjoining property or waterway is accomplished by means of a diked area, such diked area shall comply with the following requirements:
 - (1) Except as provided in subparagraph (2), the volumetric capacity of the diked area shall not be less than the greatest amount of liquid that can be released from the largest tank within the diked area, assuming a full tank. The capacity of the diked area enclosing more than one tank shall be calculated by deducting the volume of the tanks other than the largest tank below the height of the dike.
 - (2) For a tank or group of tanks with fixed roofs containing crude petroleum with boil-over characteristics, the volumetric capacity of the diked area shall not be less than the tank or tanks served by the enclosure assuming full tanks. The capacity of the diked area enclosing more than one tank shall be calculated by deducting the volume of tanks below the height of the dike.
 - (3) Walls of the diked area shall be of earth, steel, concrete or solid masonry designed to be liquid-tight and to withstand a full hydrostatic head. Earthen walls three (3) feet or more in height shall have a flat section at the top not less than two (2) feet wide. The slope of an earthen wall shall be consistent with the angle of repose of the material of which the wall is constructed.
 - (4) The walls of the diked area shall be restricted to an average height of six (6) feet above interior grade.
 - (5) Where provision is made for draining water from diked areas, drainage shall be provided at a uniform slope of not less than one percent away from tanks toward a sump, drainbox or other safe means of disposal located at the greatest practical distance from the tank. Such drains shall normally be controlled in a manner so as to prevent flammable or combustible liquids from entering natural watercourses, public sewers or public drains if

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- their presence would constitute a hazard. Control of drainage shall be accessible under fire conditions.
- (6) No loose combustible material, empty or full drum or barrel, shall be permitted within the diked area.
- (7) Each diked area containing two or more tanks shall be subdivided preferably by drainage channels or at least by intermediate curbs in order to prevent spills from endangering adjacent tanks within the diked area as follows:
 - (i) When storing normally stable liquids in vertical cone roof tanks constructed with weak roof to shell seam or approved floating roof tanks or when storing crude petroleum in producing areas in any type of tank, one subdivision for each tank in excess of 10,000 bbls. and one subdivision for each group of tanks (no tank exceeding 10,000 bbls. capacity) having an aggregate capacity not exceeding 15,000 bbls.
 - (ii) When storing normally stable flammable or combustible liquids in tanks not covered in subparagraph (1), one subdivision for each tank in excess of 100,000 gallons (2,500 bbls.) and one subdivision for each group of tanks (no tank exceeding 100,000 gallons capacity) having an aggregate capacity not exceeding 150,000 gallons (3,570 bbls.).
 - (iii) When storing unstable liquids in any type of tank, one subdivision for each tank except that tanks installed in accordance with the drainage requirements of NFPA No. 15, Standard for Water Spray Systems for Fire Protection, shall require no additional subdivision.
 - (iv) The drainage channels or intermediate curbs shall be located between tanks so as to take full advantage of the available space with due regard for the individual tank capacities. Intermediate curbs, where used, shall be not less than eighteen (18) inches in height.

(Ord. No. 66-V, § 8.6, 1-5-67)

Sec. 9-74. - Tank openings other than vents for aboveground tanks.

- (a) Connections for all tank openings other than vents shall be vapor and liquid tight.
- (b) Each connection to an aboveground tank through which liquid can normally flow shall be provided with an internal or an external valve located as close as practical to the shell of the tank. Such valves, when external, and their connections to the tank shall be of steel except when the chemical characteristics of the liquid stored are incompatible with steel. When materials other than steel are necessary, they shall be suitable for the pressures, structural stresses and temperatures involved, including fire exposures.
- (c) Each connection below the liquid level through which liquid does not normally flow shall be provided with a liquid-tight closure. This may be a valve, plug or blind, or a combination of these.
- (d) Openings for gauging shall be provided with a vapor tight cap or cover.
- (e) For Class IB and Class IC liquids other than crude oils, gasolines and asphalts, the fill pipe shall be so designed and installed as to minimize the possibility of generating static electricity.

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A fill pipe entering the top of a tank shall terminate within six (6) inches of the bottom of the tank and shall be installed to avoid excessive vibration.

(f) Filling and emptying connections which are made and broken shall be located outside of buildings at a location free from any source of ignition and not less than five (5) feet away from any building opening. Such connection shall be closed and liquid tight when not in use. The connection shall be properly identified.

(Ord. No. 66-V, § 8.7, 1-5-67)

Secs. 9-75 9-80. - Reserved.

DIVISION 5. - INSTALLATION OF UNDERGROUND TANKS

Sec. 9-81. - Location.

Excavation for underground storage tanks shall be made with due care to avoid undermining of foundations of existing structures. Underground tanks or tanks under buildings shall be so located with respect to existing building foundations and supports that the loads carried by the latter cannot be transmitted to the tank. The distance from any part of a tank storing Class I liquids to the nearest wall of any basement or pit shall be not less than one foot, and to any property line that may be built upon, not less than three feet. The distance from any part of a tank storing Class III or Class III liquids to the nearest wall of any basement, pit or property line shall be not less than one foot.

(Ord. No. 66-V, § 9.1, 1-5-67)

Cross reference Location of aboveground tanks, § 9-68.

Sec. 9-82. - Depth and cover.

Underground tanks shall be set on firm foundation and surrounded with noncorrosive, inert material such as clean sand, earth or gravel well tamped in place. Tanks shall be covered with a minimum of two (2) feet of earth, or shall be covered with not less than one foot of earth, on top of which shall be placed a slab of reinforced concrete not less than four (4) inches thick. When underground tanks are, or are likely to be, subjected to traffic, they shall be protected against damage from vehicles passing over them by at least three (3) feet of earth cover, or eighteen (18) inches of well-tamped earth, plus six (6) inches of reinforced concrete or eight inches of asphaltic concrete. When asphaltic or reinforced concrete paving is used as part of the protection, it shall extend at least one foot horizontally beyond the outline of the tank in all directions.

(Ord. No. 66-V, § 9.2, 1-5-67)

Sec. 9-83. - Vents.

(a) Location and arrangements for Class I liquids. Vent pipes from tanks storing Class I liquids shall be so located that the discharge point is outside of buildings, higher than the fill pipe opening, and not less than twelve (12) feet above the adjacent ground level. Vent pipes shall

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discharge only upward in order to disperse vapors. Vent pipes two (2) inches or less in nominal inside diameter shall not be obstructed by devices that will cause excessive back pressure. Vent pipe outlets shall be so located that flammable vapors will not enter buildings openings, or be trapped under eaves or other obstructions. If the vent pipe is less than ten (10) feet in length or greater than two (2) inches in nominal inside diameter, the outlet shall be provided with a vacuum and pressure relief device or there shall be an approved flame arrester located in the vent line at the outlet or within the approved distance from the outlet. In no case shall a flame arrester be located more than fifteen (15) feet from the outlet end of the vent line.

(b) Size of vents. Each tank shall be vented through piping adequate in size to prevent blow back of vapor or liquid at the fill opening while the tank is being filled. Vent pipes shall not be less than one and one-fourth (1¼) inches nominal inside diameter.

TABLE VI

	Vent line diameter Inches		
Maximum flow GPM	50 ft.	100 ft.	200 ft.
100	1¼-inch	1¼-inch	1¼-inch
200	1¼-inch	1¼-inch	1¼-inch
300	1¼-inch	1¼-inch	1½-inch
400	1¼-inch	1½-inch	2-inch
500	1¼-inch	1½ inch	2 inch

(c) Location and arrangements for Class II or Class III liquids. Vent pipes from tanks storing Class II or Class III flammable liquids shall terminate outside of buildings and higher than the fill pipe opening. They may be fitted with return bends, course screens or other devices to minimize ingress of foreign material.

(d) *Direction of drainage*. Vent piping shall be laid so as to drain toward the tank without sags or traps in which liquid can collect. They shall be located so that they will not be subject to any physical damage. The tank end of the vent pipe shall enter the tank through the top.

(Ord. No. 66-V, § 9.3, 1-5-67)

Sec. 9-84. - Tank openings other than vents.

(a) Connections for all tank openings shall be vapor or liquid tight.

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- (b) Openings for manual gauging if independent of the fill pipe, shall be provided with a liquid tight cap or cover. If inside a building, each such opening shall be protected against liquid overflow and possible vapor release by means of a spring loaded check valve or other approved device.
- (c) Fill and discharge lines shall enter tanks only through the top. Fill lines shall be sloped toward the tank.
- (d) For Class IB and Class IC liquids other than crude oils, gasolines and asphalts, the fill pipe shall be so designed and installed as to minimize the possibility of generating static electricity by terminating within six (6) inches of the bottom of the tank.
- (e) Filling and emptying connections which are made and broken shall be located outside of buildings at a location free from any source of ignition and not less than five (5) feet away from any building opening. Such connection shall be closed and liquid tight when not in use. The connection shall be properly identified.

(Ord. No. 66-V, § 9.4, 1-5-67)

Secs. 9-85 9-90. - Reserved.

DIVISION 6. SUPPORTS AND FOUNDATIONS FOR ALL TANK LOCATIONS

Sec. 9-91. - Materials.

Tank supports shall be installed on firm foundations. Tank supports shall be of concrete, masonry or protected steel. Single wood timber supports (not cribbing) laid horizontally may be used for outside aboveground tanks if not more than twelve (12) inches high at their lowest point.

(Ord. No. 66-V, § 10-1, 1-5-67)

Sec. 9-92. - Fire resistance protection.

Steel supports or exposed piling shall be protected by materials having a fire resistance rating of not less than two (2) hours, except that steel saddles need not be protected if less than twelve (12) inches high at their lowest point. At the discretion of the fire marshal, approved water spray protection or its equivalent may be used in lieu of fire-resistive materials to protect supports.

(Ord. No. 66-V, § 10-2, 1-5-67)

Sec. 9-93. - Construction generally.

Every tank shall be so supported as to prevent the excessive concentration of loads on the supporting portion of the shell.

(Ord. No. 66-V, § 10-3, 1-5-67)

Sec. 9-94. - Foundations.

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Tanks shall rest on the ground or on foundations made of concrete, masonry, piling or steel. Tank foundations shall be designed to minimize the possibility of uneven settling of the tank and to minimize corrosion in any part of the tank resting on the foundation.

(Ord. No. 66-V, § 10-4, 1-5-67)

Secs. 9-95 9-100. - Reserved.

DIVISION 7. - SOURCES OF IGNITION

Sec. 9-101. - Precautions to be taken.

In locations where flammable vapors may be present, precautions shall be taken to prevent ignition by eliminating or controlling sources of ignition. Sources of ignition may include open flames, lighting, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical and mechanical), spontaneous ignition, chemical and physical-chemical reactions and radiant heat.

(Ord. No. 66-V, § 11-1, 1-5-66)

Cross reference Additional restrictions for sources of ignition, § 9-157.

Secs. 9-102 9-107. - Reserved.

DIVISION 8. - TESTING OF TANKS AND CONNECTIONS

Sec. 9-108. Under applicable codes.

All tanks, whether shop built or field erected, shall be strength tested before they are placed in service in accordance with the applicable paragraphs of the code under which they were built. The ASME Code stamp, API monogram, or the label of the Underwriters' Laboratories, Inc., on a tank shall be evidence of compliance with this strength test. Tanks not marked in accordance with the above codes shall be strength tested before they are placed in service in accordance with good engineering principles and reference shall be made to the sections on testing in the codes listed in sections 9-59(c), 9-60(b) or 9-61.

(Ord. No. 66-V, § 12.1, 1-5-67)

Sec. 9-109. Hydrostatic testing.

When the vertical length of the fill and vent pipes is such that when filled with liquid the static head imposed upon the bottom of the tank exceeds ten (10) pounds per square inch, the tank and related piping shall be tested hydrostatically to a pressure equal to the static head thus imposed. In special cases where the height of the vent above the top of the tank is excessive, the hydrostatic test pressure shall be specified by the authority having jurisdiction.

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(Ord. No. 66-V, § 12.2, 1-5-67)

Sec. 9-110. - Tightness test.

In addition to the strength test called for in sections 9-108 and 9-109, all tanks and connections shall be tested for tightness. Except for underground tanks, this tightness test shall be made at operating pressure with air, inert gas or water prior to placing the tank in service. In the case of field erected tanks the strength test may be considered to be the test for tank tightness. Underground tanks and piping, before being covered, enclosed, or placed in use, shall be tested for tightness hydrostatically, or with air pressure at not less than three (3) pounds per square inch and not more than five (5) pounds per square inch.

(Ord. No. 66-V, § 12.3, 1-5-67)

Sec. 9-111. - Correction of deformations.

All leaks or deformations shall be corrected in acceptable manner before the tank is placed in service. Mechanical caulking is not permitted for correcting leaks in welded tanks except pin hole leaks in the roof.

(Ord. No. 66-V, § 12.4, 1-5-67)

Sec. 9-112. - Tanks to be operated below design pressure.

Tanks to be operated at pressure below their design pressure may be tested by the applicable provisions of sections 9-126 or 9-127 based upon the pressure developed under full emergency venting of the tank.

(Ord. No. 66-V, § 12-5, 1-5-67)

Secs. 9-113 9-118. - Reserved.

DIVISION 9. - PIPING, VALVES AND FITTINGS

Sec. 9-119. Design of piping systems.

The design (including selection of materials), fabrication, assembly, test and inspection of piping systems containing flammable or combustible liquids shall be suitable for the expected working pressures and structural stresses. Conformity with the applicable provisions or ASA B31 American Standard Code for Pressure Piping, and the provisions of this section, shall be considered prima facie evidence of compliance with the foregoing provisions.

(Ord. No. 66-V, § 13.1, 1-5-67)

Sec. 9-120. - Applicability of division.

This division does not apply to any of the following:

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- (a) Tubing or casing on any oil or gas wells and any piping connected directly thereto.
- (b) Floating craft or aircraft.
- (c) Piping within the scope of any applicable boiler and pressure vessel code.

Sec. 9-121. - Composition of piping system.

Piping systems consist of pipe, tubing, flanges, bolting, gaskets, valves, fittings, the pressure containing parts of other components such as expansion joints and strainers, and devices which serve such purposes as mixing, separating, snubbing, distributing, metering or controlling flow.

Sec. 9-122. Piping materials.

- (a) Piping materials shall be steel except as provided in subsections (b), (c), (d) and (e).
- (b) Piping may be built of materials other than steel if used underground or if required by the properties of the flammable or combustible liquid handled.

Note. In case of doubt, the supplier, producer of the flammable or combustible liquid, or other competent authority should be consulted as to suitability of the material of construction to be used.

- (c) Piping built of materials other than steel shall be designed to specifications embodying principles recognized as good engineering design for the material used and shall be approved by the authority having jurisdiction.
- (d) Piping may have combustible or noncombustible linings.
- (e) When low melting point materials such as aluminum and brass or materials that soften on fire exposure such as plastics, or nonductile materials such as cast iron, are necessary, special consideration shall be given to their behavior on fire exposure. If such materials are used in aboveground piping system or inside buildings, they shall be suitably protected against fire exposure or so located that any spill resulting from the failure of these materials could not unduly expose persons, important buildings or structures or can be readily controlled by remote valves.

Sec. 9-123. - Pipe joints.

- (a) Joints shall be made liquid tight. Welded or screwed joints or approved connectors shall be used. Threaded joints and connections shall be made up tight with a suitable lubricant or piping compound.
- (b) Pipe joints dependent upon the friction characteristics of combustible materials for mechanical continuity of piping shall not be used inside buildings. They may be used outside of buildings above or below ground. If used aboveground, the piping shall either be secured to prevent disengagement at the fitting or the piping system shall be so designed that any spill resulting from such disengagement could not unduly expose persons, important buildings or structures, and could be readily controlled by remote valves.

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(Ord. No. 66-V, § 13.5, 1-5-67)

Sec. 9-124. - Supports.

Piping systems shall be substantially supported and protected against physical damage and excessive stresses arising from settlement, vibration, expansion or contraction.

(Ord. No. 66-V, § 13.61, 1-5-67)

Sec. 9-125. - Protection against corrosion.

All piping for flammable or combustible liquids, both aboveground and underground, where subject to external corrosion, shall be painted or otherwise protected.

(Ord. No. 66-V, § 13.7, 1-5-67)

Sec. 9-126. - Valves.

Piping systems shall contain a sufficient number of valves to operate the system properly and to protect the plant. Piping systems in connection with pumps shall contain a sufficient number of valves to control properly the flow of liquid in normal operation and in the event of physical damage. Each connection to pipe lines, by which equipment such as tank cars or tank vehicles discharge liquids by means of pumps into storage tanks, shall be provided with a check valve for automatic protection against backflow if the piping arrangement is such that backflow from the system is possible.

Note. See also section 9-74(b).

(Ord. No. 66-V, § 13.8, 1-5-67)

Sec. 9-127. - Testing of piping.

All piping before being covered, enclosed or placed in use shall be tested hydrostatically or with air pressure at not less than one and one-half (1½) times the maximum anticipated pressure of the system, but not less than five pounds per square inch gauge at the highest point of the system. This test shall be maintained for at least thirty (3) minutes or for sufficient time to complete visual inspection of all joints and connections.

(Ord. No. 66-V, § 13.9, 1-5-67)

Secs. 9-128 9-133. Reserved.

DIVISION 10. STORAGE AND HANDLING OF FLAMMABLE LIQUIDS AT BULK PLANTS

Sec. 9-134. - Containers.

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- (a) Class I Liquids. Class I liquids shall be stored in closed containers, or in storage tanks aboveground outside of buildings, or underground in accordance with sections 9-57 9-61.
- (b) Class II and Class III Liquids. Class II and Class III liquids shall be stored in containers, or in tanks within buildings or aboveground outside of buildings, or underground in accordance with sections 9-57 9-61.
- (c) Separation. Containers of flammable or combustible liquids when piled one upon the other shall be separated by dunnage sufficient to provide stability and to prevent excessive stress on container walls. The height of pile shall be consistent with stability and strength of containers.

(Ord. No. 66-V, § 14.1, 1-5-67)

Cross reference—Containers for storage at service stations, § 9-143.

Sec. 9-135. - Buildings.

- (a) Exits. Rooms in which flammable or combustible liquids are stored or handled by pumps, shall have exit facilities arranged to prevent occupants being trapped in the event of fire.
- (b) Heating. Rooms in which Class I liquids are stored or handled shall be heated only by means not constituting a source of ignition, such as steam or hot water. Rooms containing heating appliances involving sources of ignition shall be located and arranged to prevent entry of flammable vapors.

(c) Ventilation:

- (1) Ventilation shall be provided for all rooms, buildings or enclosures in which Class I liquids are pumped or dispensed. Design of ventilation systems shall take into account the relatively high specific gravity of the vapors. Ventilation may be provided by adequate openings in outside walls at floor level unobstructed except by louvers or course screens. Where natural ventilation is inadequate, mechanical ventilation shall be provided.
- (2) Class I liquids shall not be stored or handled within a building having a basement or pit into which flammable vapors may travel, unless such area is provided with ventilation designed to prevent the accumulation of flammable vapors therein.
- (3) Containers of Class I liquids shall not be drawn from or filled within buildings unless provision is made to prevent the accumulation of flammable vapors in hazardous concentrations. Where mechanical ventilation is required, it shall be kept in operation while flammable liquids are being handled.

(Ord. No. 66-V, § 14.2, 1-5-67)

Sec. 9-136. Loading and unloading facilities.

(a) Tank vehicles. Tank vehicle loading or unloading facilities shall be separated from aboveground tanks, warehouses, other plant buildings or nearest line of adjoining property that may be built upon by a distance of twenty five (25) feet for Class I liquids and fifteen (15) feet for Class II and Class III liquids measured from the nearest position of any fill system.

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- (b) Use of certain equipment prohibited. Equipment such as piping, pumps, and meters used for the transfer of Class I liquids between storage tanks and the fill stem of the loading rack shall not be used for the transfer of Class II or Class III liquids.
- (c) Valves. Valves used for the final control for filling tank vehicles shall be of the self-closing type and manually held open except where automatic means are provided for shutting off the flow when the vehicle is full or after filling of a preset amount.
- (d) Static protection. The following types of tank vehicle loading racks shall be equipped with protection against static sparks during truck filling: racks dispensing Class I liquids into open domes of tank vehicles, and racks dispensing Class II and Class III liquids into open domes of tank vehicles which may contain flammable vapors from previous cargoes of Class I liquid. Protection shall consist of a metallic bond-wire permanently electrically connected to fill stem or some part of the rack structure in electrical contract with the fill-stem piping. The free end of such wire shall be provided with a clamp or equivalent device for convenient attachment to some metallic part in electrical contact with the cargo tank of the tank vehicle. The bond-wire connection shall be made prior to opening the dome covers. It shall be maintained in place during the entire filling operation and the dome covers shall be securely closed before the bond wire is disconnected from the cargo tank.
- (e) Tank car racks. Tank car loading facilities where Class I liquids are loaded through open domes shall be protected against stray currents by bonding the pipe to at least one rail and to the rack structure if metal. Multiple lines entering the rack area shall be electrically bonded together. In addition, in areas where excessive stray currents are known to exist, all pipe entering the rack area shall be provided with insulating sections to electrically isolate the rack piping from the pipe lines. No bonding between the tank car and the rack or piping is required during either loading or unloading.
- (f) Container filling facilities. Class I liquids shall not be dispensed into containers unless the nozzle and container are electrically interconnected. Where the metallic floor-plate on which the container stands while filling is electrically connected to the fill stem or where the fill stem is bonded to the container during filling operations by means of a bond-wire the provisions of this section shall be deemed to have been complied with.
- (g) Sources of ignition. Class I liquids shall not be handled, drawn, or dispensed where flammable vapors may reach a source of ignition. Smoking shall be prohibited except in designated localities. "NO SMOKING" signs shall be conspicuously posted where hazard from flammable liquid vapors is normally present.
- (h) Drainage and waste disposal. Provision shall be made to prevent flammable or combustible liquids which may be spilled at loading or unloading points from entering public sewers and drainage systems, or natural waterways. Connection to such sewers, drains, or waterways by which flammable or combustible liquids might enter shall be provided with separator boxes or other approved means whereby such entry is precluded. Crankcase drainings and flammable or combustible liquids shall not be dumped into sewers, but shall be stored in tanks or tight drums outside of any building until removed from the premises.
- (i) Fire control. Suitable fire control devices, such as small hose or portable fire extinguishers, shall be available to locations where fires are likely to occur. Additional fire-control equipment may be required where a tank of more than fifty thousand (50,000) gallons individual capacity contains Class I liquids and where an unusual exposure hazard exists from surrounding property. Such additional fire-control equipment shall be sufficient to extinguish

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a fire in the largest tank. The design and amount of such equipment shall be in accordance with approved engineering standards.

(Ord. No. 66-V, § 14.3, 1-5-67)

Secs. 9-137 9-142. - Reserved.

DIVISION 11. - STORAGE AND HANDLING OF FLAMMABLE LIQUIDS AT SERVICE STATIONS

Sec. 9-143. Containers generally.

- (a) Liquids shall be stored in approved closed containers not exceeding sixty (60) gallons capacity, in tanks located underground or in tanks in special enclosures as described in section 9-144.
- (b) Aboveground tanks, located in an adjoining bulk plant, may be connected by piping to service stations underground tanks if, in addition to valves at aboveground tanks, a valve is also installed within control of service station personnel.
- (c) Apparatus dispensing Class I liquids into the fuel tanks of motor vehicles of the public shall not be located at a bulk plant unless separated by a fence or similar barrier from the area in which bulk operations are conducted.
- (d) The provisions of subsection (a) shall not prohibit the temporary use of portable or semi-portable tanks in conjunction with the dispensing of flammable or combustible liquids into the fuel tanks of motor vehicles or other motorized equipment on premises not normally accessible to the public. Such installations shall only be made under permit from the city manager. The permit shall include a definite time limit.
- (e) Class I liquids shall not be stored or handled within a building having a basement or pit into which flammable vapors may travel, unless such area is provided with ventilation designed to prevent the accumulation of flammable vapors therein.
- (f) Inventory records shall be maintained and reconciled on all Class I liquid storage tanks for possible indication of leakage from tanks or piping.

(Ord. No. 66-V, § 15.11, 1-5-67)

Cross reference — Containers for storage at bulk plants, § 9-134.

Sec. 9-144. - Special enclosures.

- (a) When installation of tanks in accordance with section 9-81 through section 9-84 is impractical because of property or building limitations, tanks for flammable or combustible liquids may be installed in buildings if enclosed and upon specific approval of the city manager.
- (b) Enclosure shall be substantially liquid and vaportight without backfill. Sides, top and bottom of the enclosure shall be of reinforced concrete at least six inches thick, with openings for inspection through the top only. Tank connections shall be so piped or closed that neither vapors nor liquid can escape into the enclosed space. Means shall be provided whereby

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- portable equipment may be employed to discharge to the outside any liquid or vapors which might accumulate should leakage occur.
- (c) At automotive service stations provided in connection with tenant or customer parking facilities at or below grade level in large buildings of commercial, mercantile or residential occupancy, tanks containing Class I liquids, installed of necessity in accordance with (b), shall not exceed six thousand (6,000) gallons individual or eighteen thousand (18,000) gallons aggregate capacity.

(Ord. No. 66-V, § 15.12, 1-5-67)

Sec. 9-145. - Inside buildings.

- (a) Except where stored in tanks as provided in section 9-144, no Class I liquids shall be stored within any service station building except in closed containers of aggregate capacity not exceeding one hundred twenty (120) gallons. One container not exceeding sixty (60) gallons capacity equipped with an approved pump is permitted.
- (b) Class I liquids may be transferred from one container to another in lubrication or service rooms of a service station building provided the electrical installation complies with National Electrical Code for Class I Group D requirements for hazardous locations and heating equipment complies with section 9–155.
- (c) Class II and Class III liquids may be stored and dispensed inside service station buildings from tanks of not more than one hundred twenty (120) gallons capacity each.

(Ord. No. 66-V, § 15.13, 1-5-67)

Sec. 9-146. - Labeling of containers.

No sale or purchase of any Class I, II or III liquids shall be made in containers unless such containers are clearly marked with the name of the product contained therein.

(Ord. No. 66-V, § 15.14, 1-5-67)

Sec. 9-147. - Dispensing into portable containers.

No delivery of any Class I liquids shall be made into portable containers unless the container is constructed of metal or is approved by the fire marshal, has a tight closure with screwed or spring cover, and is fitted with a spout or so designed that the contents can be poured without spilling.

(Ord. No. 66-V, § 15.15, 1-5-67)

Sec. 9-148. - Attendance or supervision of dispensing.

(a) Each service station open to the public shall have an attendant or supervisor on duty whenever the station is open for business. The attendant shall supervise individual dispensing devices except as provided in section 9-154.

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(b) Service stations not accessible to or open to the public do not require an attendant or supervisor. Such stations may be used by commercial, industrial or manufacturing establishments.

Sec. 9-149. - Dispensing systems Location.

- (a) Generally. Dispensing devices at automotive service stations shall be so located that all parts of the vehicle being serviced will be on the premises of the service station.
- (b) Inside location. Approved dispensing units may be located inside of buildings upon specific approval of the fire marshal. The dispensing area shall be separated from other areas in a manner approved by the fire marshal. The dispensing unit and its piping shall be protected against physical damage by vehicles either by mounting on a concrete island or equivalent means and shall be located in a position where it cannot be struck by a vehicle descending a ramp or other slope out of control. The dispensing area shall be provided with an approved mechanical or gravity ventilation system. When dispensing units are located below grade, only approved mechanical ventilation shall be used and the entire dispensing area shall be protected by an approved automatic sprinkler system. Ventilating systems shall be electrically interlocked with gasoline dispensing units so that the dispensing units cannot be operated unless the ventilating fan motors are energized.

(Ord. No. 66-V, § 15.31, 1-5-67)

Sec. 9-150. Same Emergency power cutoff.

A clearly identified and easily accessible switch(es) or a circuit breaker(s) shall be provided at a location remote from dispensing devices to shut off the power to all dispensing devices in the event of an emergency.

Sec. 9-151. - Same Dispensing units.

- (a) Class I liquids shall be transferred from tanks by means of fixed pumps so designed and equipped as to allow control of the flow and to prevent leakage or accidental discharge.
- (b) Dispensing devices for Class I liquids [which] shall be of approved type devices meeting the standards of the Underwriters' Laboratories, Inc., may be deemed to be in compliance with this section.
- (c) Class I liquids shall not be dispensed by pressure from drums, barrels, and similar containers. Approved pumps taking suction through the top of the container or approved self-closing faucets shall be used.
- (d) The dispensing units, except those attached to containers, shall be mounted on a concrete island or protected by equivalent means.

Sec. 9-152. - Same Remote pumping systems. Ord. 19-H

- (a) Applicability. This section shall apply to systems for dispensing Class I liquids where such liquids are transferred from storage to individual or multiple dispensing units by pumps located elsewhere than at the dispensing units.
- (b) Pumps. Pumps shall be designed or equipped so that no part of the system will be subjected to pressures above its allowable working pressure. Pumps installed above grade, outside of buildings, shall be located not less than ten (10) feet from lines of adjoining property which may be built upon, and not less than five (5) feet from any building opening. When an outside pump location is impractical, pumps may be installed inside of buildings as provided for dispensers in section 9 149(b), or in pits as provided in section 9 155(a). Pumps shall be substantially anchored and protected against physical damage by vehicles.
- (c) Pits. Pits for subsurface pumps or piping manifolds of submersible pumps shall withstand the external forces to which they may be subjected without damage to the pump, tank or piping. The pit shall be no larger than necessary for inspection and maintenance and shall be provided with a fitted cover.
- (d) *Pump control*. A control shall be provided that will permit the pump to operate only when a dispensing nozzle is removed from its bracket on the dispensing unit and the switch on this dispensing unit is manually actuated. This control shall also stop the pump when all nozzles have been returned to their brackets.
- (e) *Impact valve*. An approved impact valve, incorporating a fusible link, designed to close automatically in event of severe impact or fire exposure shall be located in the dispensing supply line at the base of each individual dispensing device.
- (f) Testing. After the completion of the installation, including any paving, that section of the pressure piping system between the pump discharge and the connection for the dispensing facility shall be tested for at least thirty (30) minutes at the maximum operating pressure of the system. Such tests shall be repeated at one-year intervals thereafter.

(Ord. No. 66-V, § 15.34, 1-5-67)

Sec. 9-153. - Same Delivery nozzles.

- (a) Hose nozzle valves of either the manual or automatic closing type for dispensing Class I liquids into a fuel tank or into a container shall be manually held open during the dispensing operation except as provided in subsection (b).
- (b) On any service station dispenser accessible to the public a listed automatic-closing type nozzle with latch-open device is permitted only when all dispensing of Class I liquids is to be done by the service station attendant.
- (c) If the dispensing of Class I liquids at a service station available and open to the public is to be done by a person other than the service station attendant, the nozzle shall be a listed automatic-closing type without a latch-open device.

(Ord. No. 66-V, § 15.35, 1-5-67)

Sec. 9-154. - Same Special type dispensers.

(a) Approved special dispensing devices such as, but not limited to, coin-operated, card-operated and remote preset types are permitted at service stations, provided that dispensing of Class I

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liquids is under observation and control of a competent attendant at all times and provided that emergency controls are installed at a location acceptable to the fire marshal. Instructions for operation of dispensing devices shall be conspicuously posted.

(Ord. No. 66-V, § 15.36, 1-5-67)

Sec. 9-155. - Heating equipment.

- (a) Generally. Heating equipment shall be installed as provided in subsections (b) through (e).
- (b) Conventional. Heating equipment may be installed in the conventional manner in an area except as provided in subsections (c), (d), or (e).
- (c) Special separated room. Heating equipment may be installed in a special room separated from hazardous areas by walls having a fire resistance rating of at least one (1) hour and without any openings in the walls within eight (8) feet of the floor into hazardous areas. This room shall not be used for combustible storage and all air for combustion purposes shall come from outside the building.
- (d) Gas or oil heating equipment. Heating equipment using gas or oil fuel may be installed in the lubrication, sales or service room where there is no dispensing or transferring of Class I liquids provided the bottom of the combustion chamber is at least eighteen (18) inches above the floor and the heating equipment is protected from physical damage by vehicles.
- (e) Gas or oil heating equipment for garages. Heating equipment using gas or oil fuel listed for use in garages may be installed in the lubrication or service room where Class I liquids are dispensed provided the equipment is installed at least eight (8) feet above the floor.

(Ord. No. 66-V, § 15.4, 1-5-67)

Sec. 9-156. - Drainage and waste disposal.

Provision shall be made in the area where Class I liquids are dispensed to prevent spilled liquids from flowing into the interior of service station buildings. Such provision may be by grading driveways, raising door sills, or other equally effective means. Crankcase drainings and flammable or combustible liquids shall not be dumped into sewers but shall be stored in tanks or drums outside of any building until removed from the premises.

(Ord. No. 66-V, § 15.5, 1-5-67)

Sec. 9-157. Sources of ignition.

In addition to the previous restrictions of this chapter, the following shall apply:

- (1) There shall be no smoking or open flames in the areas used for fueling, servicing fuel systems for internal combustion engines, receiving or dispensing of flammable or combustible liquids.
- (2) Conspicuous and legible signs prohibiting smoking shall be posted within sight of the customer being served.
- (3) The motors of all equipment being fueled shall be shut off during the fueling operation.

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(Ord. No. 66-V, § 15.6, 1-5-67)

Cross reference—General restrictions for controlling sources of ignition, § 9-101.

Sec. 9-158. - Fire control generally.

Each service station shall be provided with at least one fire extinguisher having a minimum classification of 6 B, C located so that an extinguisher will be within seventy-five (75) feet of each pump, dispenser, underground fill pipe opening and lubrication or service room.

(Ord. No. 66-V, § 15.7, 1-5-67)

Secs. 9-15940 — 9-168. - Reserved.

Sec. 9-169. - When required.

No building or any type of construction for occupancy shall be constructed in such a manner that any part of the structure is more than one hundred fifty (150) feet from a public street or highway; provided, however, that such structure may be erected at a greater distance if the owner designates, constructs and maintains a fire lane or access easement having a minimum width of twenty (20) feet measured from the face of the curb to the face of the curb and a minimum height clearance of twenty (20) feet terminating within one hundred (100) feet of the farthest point of such structure; provided, further, however, that no fire lane shall be required for any single-family dwelling.

Sec. 9-170. - Specifications.

Any fire lane more than one hundred (100) one hundred fifty feet in length shall either connect at each end to a dedicated street or be provided with a turnaround having a minimum radius of fifty (50) feet when measured from the centerline of the access roadway to the curb. All fire lanes shall be maintained and kept in a state of good repair at all times by the owner, manager or person in charge of the premises, and the city shall never be responsible for the maintenance thereof.

Sec. 9-171. - Markings.

(a) Signs:

- (1) The owner, manager or person in charge of any building for which fire lanes have been approved by the fire marshal or his authorized representative shall post and maintain appropriate signs in conspicuous places along such fire lanes stating: "No Parking-Fire Lane." Such signs shall be twelve (12) inches wide and eighteen (18) inches high, with a companion sign twelve (12) inches wide and six (6) inches high stating: "Tow-Away Zone."
- (2) Any "No Parking-Fire Lane" or "Tow-Away Zone" sign shall be painted on a white background with letters and borders in red. The sign(s) shall be installed such that the bottom of the sign is not less than three (3) feet above grade and the top of the sign is not greater than five (5) feet above grade.
- (3) Where the placement of such signs is not applicable or when, in the opinion of the fire marshal or his authorized representative, such signs would cause a burden on the management, curb markings may be used.

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(b) Curb markings. Any "No Parking-Fire Lane" or _ "Tow-Away Zone" curb markings shall be painted on a red background with letters in white. Such lettering shall be a minimum of four (4) inches in height with a one-half (½) inch stroke. Such lettering shall state: "No Parking-Fire Lane/Tow-Away Zone." Curb markings shall be placed at a distance no greater than fifteen (15) feet between the end of one notice to the beginning of the next.

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Sec. 9-178. - Submission of plats; duties of contractors.

- (a) Prior to the issuance of a building permit, plats with designated fire lanes shall be submitted to the planning and development department for review by the fire marshal, who then will approve or disapprove the designated fire lanes and indicate the needed signs and pavement markings. One of these plats shall be retained by the <u>fire marshalEngineering Department</u>.
- (b) The contractor or person in charge of any construction site for commercial, industrial, mercantile, educational, institutional, assembly, hotel, multifamily dwelling, or manufactured home park occupancies shall provide and maintain during construction an approved all-weather fire lane not less than twenty (20) feet in width, as shown on approved plats. Final paving of such fire lane shall be completed prior to the issuance of any certificate of occupancy.

Sec. 9-179. - Existing buildings and other types of construction for occupancy.

Buildings and any other type of construction for occupancy existing on the effective date of this ordinance shall be required to comply with the requirements of this article; provided, however, that the fire marshal may modify a requirement of this article pursuant to section 9-175 hereof. The owner of a building or any other type of construction for occupancy, or his designated agent, may appeal a decision of the fire marshal to the building board of adjustment and appeals in accordance with the provisions in section 9-176 of this article.

Sec. 9-180. - Penalties for violation of article.

Any person who shall violate any provisions of this article or fail to comply therewith, or who shall violate or fail to comply with any order made hereunder, or who shall build in violation of any detailed statement of specifications or plans submitted and approved hereunder or any certificate or permit issued hereunder shall be guilty of a misdemeanor which shall be punishable by a fine of not less than twenty-five dollars (\$25.00) nor more than two thousand dollars (\$2,000.00).

ARTICLE V. - OUTDOOR BURNING

Sec. 9-185. - Definitions.

The following definitions shall apply in the interpretation and enforcement of this article:

Brush means cuttings or trimmings from trees, shrubs, gardens or lawns and similar materials.

Combustible material means magazines, books, brush, pasteboard boxes, rags, paper, straw, sawdust, packing material, shavings, boxes and all rubbish and refuse that will ignite through contact with flames of ordinary temperatures.

Combustion unit means any boiler plant, furnace, incinerator, domestic fireplace, flare, engine or other device used to oxidize solid, liquid or gaseous fuels.

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Domestic waste means garbage and rubbish resulting from the function of life within a residence.

Garbage means solid waste consisting of putrescible animal and vegetable waste materials resulting from the handling, preparation, cooking and consumption of food, including waste materials from markets, storage facilities, and handling and sale of produce and other food products.

Landclearing operation means the uprooting, cutting or clearing of vegetation in connection with conversion for the construction of buildings, rights-of-way, residential, commercial, or industrial development, or the clearing of vegetation to enhance property value, access or production. It does not include the maintenance burning of on-site property wastes such as fallen limbs, branches, or leaves, or other wastes from routine property clean-up activities, nor does it include burning following clearing for ecological restoration.

Outdoor burning means any fire or smoke producing process which is not conducted in a combustion unit.

Person means any individual, corporation, organization, partnership, business trust, association or any other legal entity.

Practical alternative means an economically, technologically, ecologically and logistically viable option. Practical alternatives may include recycling, composting, mechanical chipping or mulching, landfilling, logging, or using a state registered forced air trench burner system or air curtain destructors.

Rubbish means nonputrescible solid waste (excluding ashes), consisting of both combustible and noncombustible waste materials. Combustible rubbish includes paper, rags, cartons, wood, excelsior, furniture, rubber, plastics, yard trimmings, leaves, or similar materials; noncombustible rubbish includes glass, crockery, tin cans, aluminum cans, metal furniture, and similar materials that will not burn at ordinary incinerator temperatures (one thousand six hundred (1,600) degrees Fahrenheit to one thousand eight hundred (1,800) degrees Fahrenheit).

Solid waste means garbage, rubbish, combustible materials, ashes, street cleanings, dead animals, abandoned automobiles and all other solid waste.

Structure containing sensitive receptor(s) means a man-made structure utilized for human residence or business, the containment of livestock, or the housing of sensitive live vegetation. The term "man-made structure" does not include such things as range fences, roads, bridges, hunting blinds or facilities used solely for the storage of hay or other livestock feeds. The term "sensitive live vegetation" is defined as vegetation which has potential to be damaged by smoke and heat, examples of which include, but are not limited to, nursery production, mushroom cultivation, pharmaceutical plan production, or laboratory experiments involving plants.

TNRCC means the Texas Natural Resource Conservation Commission TCEQ means Texas Commission on Environmental Quality or its successor agency.

Uncontrolled outdoor burning means any outdoor burning that is not conducted pursuant to an exemption provided in this article.

Sec. 9-186. - Declaration of nuisance.

The city council of the City of Alvin hereby declares that uncontrolled outdoor burning of rubbish, garbage, brush, combustible materials and all other solid waste within the city limits of Alvin and within five thousand (5,000) feet of the city limits of Alvin is a nuisance that creates

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conditions that are detrimental to the lives, health and property of the citizens of Alvin and interferes with the enjoyment of property and the public peace and comfort.

Sec. 9-187. - Uncontrolled outdoor burning prohibited.

No person may cause, suffer, allow or permit any uncontrolled outdoor burning of rubbish, garbage, brush, combustible materials or solid waste within the city limits or within five thousand (5,000) feet of the city limits of Alvin.

Sec. 9-188. - Exceptions.

Outdoor burning of trash, rubbish, garbage, brush, combustible materials or solid waste shall be authorized for:

- (a) Training fire-fighting personnel when requested in writing and when authorized either verbally or in writing by the fire marshal. The burning shall be authorized if notice of denial from the fire marshal is not received within ten (10) working days after the date of the postmark or date of personal delivery of the request.
- (b) Fires used solely in the noncommercial preparation of food.
- (c) Fires used solely for recreational or ceremonial purposes or used exclusively for the purpose of supplying warmth during cold weather, subject, however, to requirements of sections 9-189 and 9-190 hereof.
- (d) Domestic waste burning at a property designated for and used exclusively as a private residence, housing not more than three (3) families, when collection of domestic waste is not provided or authorized by the local governmental entity having jurisdiction and when the waste is generated only from that property. Provision of waste collection refers to collection at the premises where the waste is generated.
- (e) Diseased animal carcass burning when burning is the most effective means of controlling the spread of disease.
- (f) On-site burning of trees, brush, and other plant growth for right-of-way maintenance, landclearing operations, and maintenance along water canals when no practical alternative to burning exists and when the materials are generated only from that property. Structures containing sensitive receptors must not be negatively affected by the burn. Such burning shall be subject to the requirements of sections 9-189 and 9-190 of this article. For a single project entailing multiple days of burning, the person must not circumvent the rule for a continual burning situation established by the TNRCCTCEQ.
- (g) Crop residue burning for agricultural management purposes when no practical alternative exists. Such burning shall be subject to the requirements of sections 9-189 and 9-190 of this article, and structures containing sensitive receptors must not be negatively affected by the burn.
- (h) Brush, trees, and other plant growth causing a detrimental public health and safety condition burned by the city or county at a site it owns upon receiving site and burn approval from the TNRCCTCEQ.
- (i) Removal of fire hazards when there is no practical alternative and the burning will not contribute to a nuisance, traffic hazard or a violation of any federal or state ambient air standard. Any such burning shall be subject to the requirements of sections 9-189 and 9-190 of this article.

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(j) Any other outdoor burning authorized under the Texas Clean Air Act (Chapter 382 of the Health and Safety Code) and the rules adopted thereunder by the TNRCCTCEQ, as such laws may be hereafter amended.

Sec. 9-189. - Permit requirements.

- (a) Any person desiring to conduct outdoor burning under section 9-188 (c), (f), (g) or (i) shall apply for and obtain a permit from the fire marshal. A copy of the permit and all required paperwork shall be maintained at the burn site for the duration of the permit period. A permit period shall be commensurate with the projected time period necessary for the outdoor burning and the expiration date shall be stated on the permit.
- (b) The outdoor burning permit fees set forth in chapter 28 of this Code shall apply to this article.
- (c) In cases where a person commences outdoor burning without a required permit, the fire marshal shall issue an order requiring the person to stop burning and shall conduct an inspection/special investigation of the burn site prior to issuance of a permit. Additionally, charges may be filed in municipal court for violating this article. An inspection/special investigation fee in the amount set forth in chapter 28 of this Code shall be applied in addition to the permit fee.
- (d) A permit may be denied or revoked by the fire marshal upon occurrence of any one or more of the following:
 - (1) The permittee provides false information on the permit application;
 - (2) The permittee does not comply with the requirements of this article; and/or
 - (3) The permittee adds garbage, rubbish, brush, combustible material or any other solid waste to the permitted burn site for which the permit has not been issued.

Sec. 9-190. - General requirements for allowable outdoor burning.

Outdoor burning which is authorized pursuant to section 9-188 of this article shall be subject to the following requirements:

- (a) Burning shall be commenced and conducted only when wind direction and other meteorological conditions are such that smoke and other pollutants will not cause adverse effects to any public road, landing strip, navigable water, or off-site structure containing sensitive receptor(s).
- (b) If at any time the burning causes or may tend to cause smoke to blow onto or across a road or highway, it is the responsibility of the person initiating the burn to post flagpersons on affected roads in accordance with the requirements of the Texas Department of Public Safety.
- (c) Burning must be conducted downwind of or at least three hundred (300) feet (ninety (90) meters) from any structure containing sensitive receptors located on adjacent properties unless prior written approval is obtained from the adjacent occupant with possessory control.
- (d) Burning shall be conducted in compliance with the following meteorological and timing considerations:
 - (1) The initiation of burning shall commence no earlier than one hour after sunrise. Burning shall be completed on the same day not later than one hour before sunset, and shall be attended by a responsible party at all times during the active burn phase

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when the fire is progressing. In cases where residual fires and/or smoldering objects continue to emit smoke after this time, such areas shall be extinguished if the smoke from these areas has the potential to create a nuisance or traffic hazard condition. In no case shall the extent of the burn area be allowed to increase after this time.

- (2) Burning shall not be commenced when surface wind speed is predicted to be less than six (6) miles per hour (mph) (five (5) knots) or greater than twenty-three (23) mph (twenty (20) knots) during the burn period.
- (3) Burning shall not be conducted during periods of actual or predicted persistent low-level atmospheric temperature inversions or in areas covered by a current air stagnation advisory.
- (e) Electrical insulation, treated lumber, plastics, non-wood construction/demolition materials, heavy oils, asphaltic materials, potentially explosive materials, chemical wastes, and items containing natural or synthetic rubber must not be burned.

Sec. 9-191. - Penalty.

Any person who violates any provision of this article shall be guilty of a misdemeanor which shall be punishable by a fine of not less than two hundred dollars (\$200.00) nor more than two thousand dollars (\$2,000.00).

Sec. 9-192. - Responsibility for consequences of outdoor burning.

The authority to conduct outdoor burning under this article does not exempt or excuse any person responsible from the consequences, damages, or injuries resulting from the burning and does not exempt or excuse anyone from complying with all other applicable laws or ordinances, regulations, and orders of governmental entities having jurisdiction, even though the burning is otherwise conducted in compliance with this article.

Sec. 9-193. - Recognition of a state law.

Nothing contained in this article shall be construed to either (i) permit any burning in violation of the Texas Clean Air Act or any rule, regulation or order of the Texas Clean Air Act or the rules, regulations or orders of the Texas Clean Air Act or the rules, regulation or orders of the Texas Clean Air Act or the rules, regulation at the rules

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Secs. 9-194—9-200. - Reserved.

ARTICLE VI. - FIRE PROTECTION SYSTEMS

Sec. 9-201. - Smoke detectors.

The installation of UL- or FM-approved smoke detectors shall be required in any new building or structure, either residential or commercial, within the city limits of the City of Alvin. The smoke detectors shall be installed with AC power and wired directly together with battery backup so that if one smoke detector activates, all smoke detectors within the particular or structure will sound an audible alarm. In existing buildings and structures, either residential or commercial, only battery-powered are required. All smoke detectors shall be installed every nine hundred (900) square feet and approved by the fire marshal. All such smoke detectors installed in this manner shall be maintained in working order by the owner, occupant or other person charged with responsibility for the management, care and maintenance of such building or structure.

Exception: If there is an approved, listed and/or required fire protection system (i.e., fire sprinkler system, fire alarm system) in place in such commercial building(s) or structure(s) within the City of Alvin, the requirement for the <u>AC powered</u> smoke detectors may be waived upon approval by the fire marshal.

Sec. 9-202 – Fire Alarm Activation.

Upon activation of any automatic fire alarm system, all occupants of the structure shall be evacuated and shall remain outside the structure until the fire department has determined that no fire or danger exists. To enable fire department personnel to locate the area or zone activated, occupants of the structure shall not reset an alarm activation. A trained individual with the responsibility to respond to an emergency may only silence alarm activations if such can be achieved without resetting the alarm. Only fire department personnel or employees of the fire alarm company may reset a fire alarm system.

Sec. 9-203. - Reserved.

Sec. 9-204. - Fire department access.

- (a) Subject. Fire department access gates and key boxes.
- (b) *Purpose*. The purpose of this policy is to clarify existing ordinance requirements adopted by the City of Alvin for installation of fire department access gates and key boxes. This policy also establishes uniform and consistent guidelines for enforcement for structures within the city limits of the City of Alvin.
- (c) Generally.
 - (1) Fire department access gates and key boxes will only be used during emergencies by duly authorized personnel of the Alvin Volunteer Fire Department and for key box maintenance by the City of Alvin Fire Marshal., and for inspections by the City of Alvin fire Marshal.
 - (2) It is the sole responsibility of the owner or designated representative of the building or structure to purchase a fire department access gate and or key boxes from the approved vendor.

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- (3) The Knox Company shall be the only vendor to be used for fire department access gates and boxes.
- (d) Vehicular access gates. Any person or company who shall install or utilize any type of security gate to control vehicular access into a private residential project, commercial project or any dedicated private street must receive written approval from the fire marshal in each specific case.

Security gates to control vehicular access into private property must conform to the following requirements before they shall be considered as approved gates:

- (1) Gate width options, minimum openings.
 - a. Single gate. One twenty-eight-foot gate that opens to provide unobstructed access to the full twenty-eight-foot street width at a project entrance.
 - b. Two gates. Two (2) fourteen-foot gates that open to provide access to the full twenty-eight-foot street width at a project entrance.
 - c. Width variances. Subject to the written approval of the fire marshal, the width of any gate may be varied to accommodate the width or physical make-up of any street or private drive, so long as any emergency or other public service vehicles have immediate unobstructed access to such parking area or private street without delay. An applicant for a variance shall pay a non-refundable fee, in an amount provided for in the fee schedule in chapter 28.
 - d. Entrance. All openings or access points from public streets to the private streets in any development project are to be considered entrances by definition.
- (2) Design and operating specifications.
 - a. All automated gates must have a manual override to be approved by the fire marshal.
 - b. All manual gates and their locking gates must be approved by the fire marshal.
 - c. All gates shall have an emergency 911 access box mounted on a breakaway post no higher than five (5) feet, or at the highest point on any hinge post under five (5) feet.
 - d. All specifications and contents of an emergency 911 access box shall be available in the office of the fire marshal.
 - e. All emergency 911 access boxes shall be locked with a standard lock Knox Padlock as designated by the fire marshal.
 - f. During any emergency or the entry of any public service vehicles, all gates shall remain open after entry until closed manually.
 - g. The property owner, property manager or gate operator shall provide by December 20 of each year, a schedule for the upcoming year of all access codes to all access gates to the fire marshal, the fire department, the emergency medical services department, and the police department.
- (e) Key boxes at building access.
 - (1) All buildings, subject to the requirements of this chapter, shall provide and install therein a secured key box that is U.L. rated of a type approved by the fire marshal.
 - (2) Individual tenants in multitenant buildings may or may not be required to place their key in this box based on their ability to meet the exemption requirements listed in this section.

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- (3) A key box shall be installed in all of the following locations:
 - a. All buildings or parts of buildings having approved fire detection and alarm systems.
 - b. All buildings or parts of buildings having approved fire suppression systems.
 - c. All buildings or parts of buildings classified as a Group H Hazardous, storing explosives, and Group S Storage, storing flammable or combustible material.
 - da. All buildings or parts of buildings classified as Groups A—Assembly, B—Business, E—Educational, F—Factory/Industrial, H-Hazardous, I—Institutional, and M—M—Mercantile, and S-Storage.

(4) Exemptions:

- a. Single-family dwellings, individual family dwellings in multitenant residential buildings.
- b. Residential dwellings with four (4) units or less under a common roof.
- c. All buildings that maintain office personnel in constant attendance of the premises twenty-four (24) hours a day_± and are three (3) stories in height.
- d. Any new or existing commercial buildings that are not required under subsection (c)(1) or (c)(2) of this section.
- <u>e.d.</u> Financial buildings <u>that are FDIC insured</u> and stand alone <u>automated teller machine</u> <u>automotive transaction machine</u> buildings.
- fe. Government buildings and regulated government buildings where federal law prohibits accessBuildings that are owned or leased by the federal government.

(f) Key box contents.

- (1) A key box as required in this section shall be keyed to allow for one master key to be in possession of city emergency personnel. The building owner or manager should have a key that would restrict them to their own key box.
- (2) The key box shall contain keys to:
 - a. Locked points of ingress, whether on the interior or exterior of such building.
 - b. Locked mechanical rooms.
 - Locked electrical rooms.
 - d. Locked breaker panel or alarm panel rooms.
 - e. Elevator controls.
 - f. Locked roof access doors.
 - g. Other areas of the building as directed by the fire marshal.
- (3) If a building contains a reportable amount of hazardous materials, the key box should contain a material safety data sheet (MSDS) for each hazardous material.
- (4) The key box should also contain a design layout of the building and any emergency contingency plans.

Secs. 9-205—9-209. - Reserved.

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ARTICLE VII. - PRECAUTIONS AGAINST FIRE

DIVISION 1. - TRASH DISPOSAL RECEPTACLES

Sec. 9-210. - Definitions.

The following definitions shall apply to this article:

Opaque material shall mean impervious to light, so that images cannot be seen through it.

Trash disposal receptacles shall include, but are not limited to, dumpsters or other receptacles used to hold materials for disposal, recycling or donation drop-offs.

Workmanlike shall mean construction work that is done in a way that is thorough and satisfactory.

Sec. 9-211. - Application of division.

- (1) The location and container of all trash disposal receptacles shall be approved by the fire marshal. Adequate lighting shall be provided within an apartment complex, residential property or commercial properties. All trash disposal receptacles shall comply with applicable local, state and federal regulations pertaining to solid and liquid waste storage, collection and disposal.
- (2) All trash disposal receptacles within the city which are visible from a public road or sidewalk shall be screened from public view by a fence or wall of construction in conforming with city building codes, and shall be constructed in a workmanlike manner. Such fence or wall shall be composed of opaque materials and constructed to a height at least equal to the maximum height above the ground of any trash disposal receptacles maintained in the trash disposal area. Any opening provided to allow access to or removal of trash disposal receptacles from the area shall be kept in a closed position except during those times when a person or vehicle is accessing the receptacles.
- (3) All trash disposal receptacles shall be placed on private property and on a permanent concrete surface, no less than fifteen (15) feet from any (building and five (5) feet from any property line). The access from the public roadway to the trash disposal receptacles shall be a permanent concrete surface.
- (4) All used cooking oil, used flammable and combustible liquids and liquid recycling collection containers shall comply with the same requirements as trash disposal receptacles.
- (5) Donation boxes shall be placed on permanent all-weather type surfaces and approved by the fire marshal. All boxes will comply with the distance requirements from building and property lines. No material shall be allowed to be placed outside of the donation boxes.
- (6) Any violation of this section will be a five-hundred-dollar-fine.
- (7) This section shall become effective for pre-existing receptacles two (2) years from passing of this division, and immediately for new construction.

Secs. 9-212—9-222. - Reserved.

<u>Section 3.</u> Severability. If any provision of this Ordinance or the application of any provision to any person or circumstance is held invalid, the invalidity shall not affect other provisions or

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applications of the ordinance which can be given effect without the invalid provision or application, and to this end the provisions of this Ordinance are declared to be severable.

<u>Section 4.</u> Code of Ordinances. It is the intention of the Council that this Ordinance shall become a part of the Code of Ordinances of the City of Alvin, Texas, and may be renumbered and codified therein accordingly.

<u>Section 5</u>. Penalty. Any person, firm or corporation violating a provision of this Ordinance shall be guilty of a misdemeanor, and upon conviction shall be subject to a fine in accordance with the general penalty section 1-5 of the Code of Ordinances.

<u>Section 6.</u> Publication. The City Secretary of the City of Alvin is hereby directed to publish this ordinance, or its caption and penalty clause, in one issue of the official City newspaper as required by Chapter 52 of the Texas Local Government Code and the City of Alvin Charter.

<u>Section 7.</u> Effective Date. This Ordinance shall take effect immediately after its passage and publication in accordance with the provisions of Chapter 52 of the Texas Local Government Code, and the City of Alvin Charter.

<u>Section 8.</u> Open Meetings. It is hereby officially found and determined that the meeting at which this ordinance is passed was open to the public as required and that public notice of the time, place, and purpose of said meeting was given as required by the Open Meetings Act, Chapter 551 of the Texas Government Code.

PASSED AND APPROVED on first and final reading on theday of, 2019	
THE CITY OF ALVIN, TEXAS	ATTEST
By: Paul A. Horn, Mayor	By: Dixie Roberts, City Secretary

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